

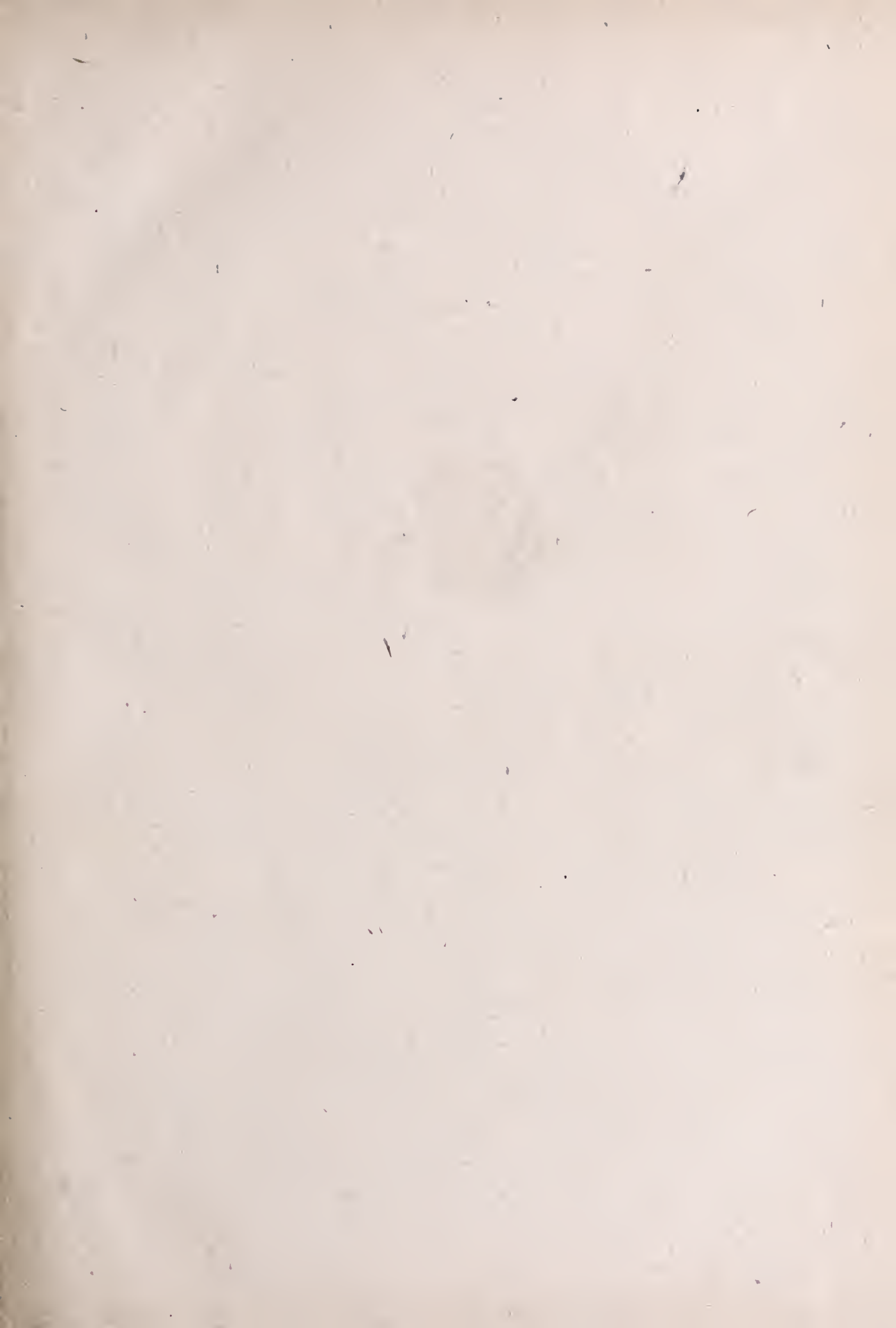
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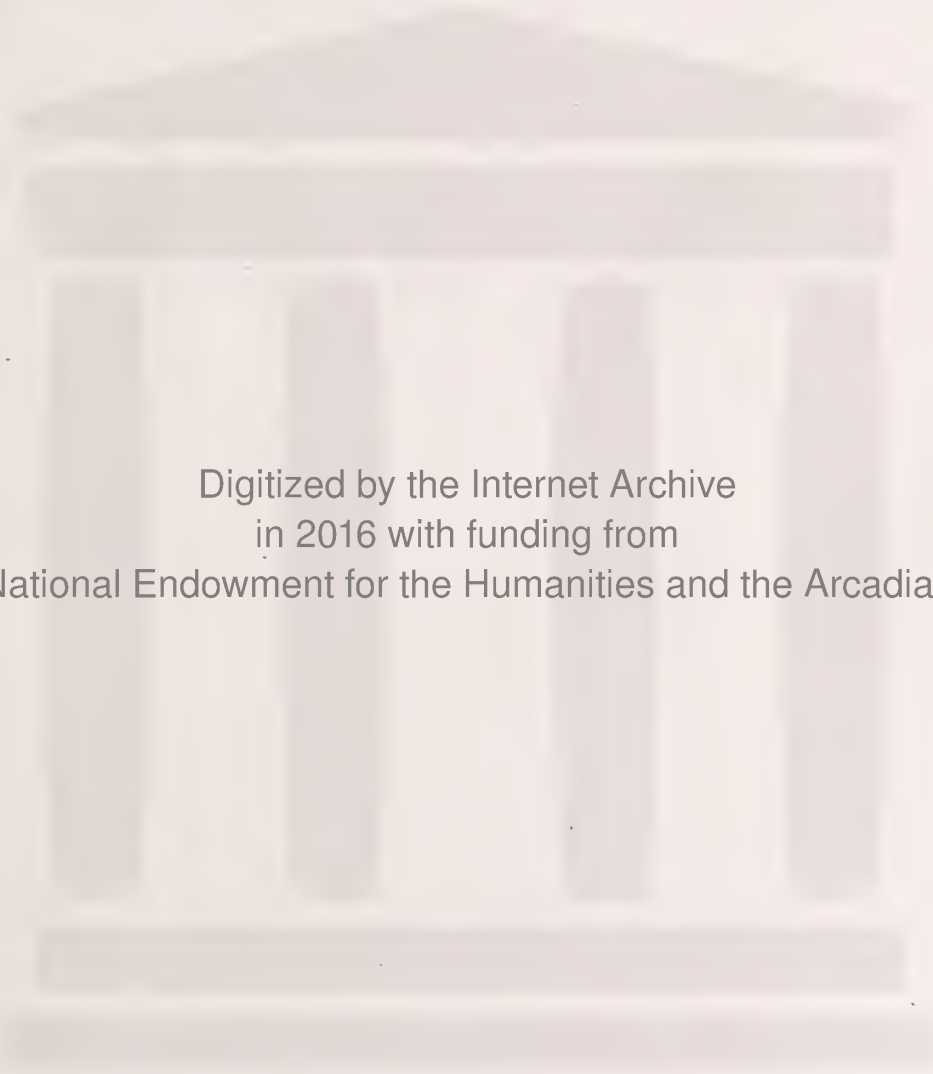
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Serum Ferments and Antiferments After Feeding.—According to the authors, an increase in noneoagulable nitrogen of the serum can be determined after feeding, reaching a maximum in about six hours. This increase is greatest in the portal blood and is partially due to an increase in amino-acids. There is no increase in proteoses. There is usually a progressive decrease in serum protease, reaching a minimum after from five to seven hours. The portal blood may show an unaltered or an increased amount of protease. The serum antiferment shows a slight increase, but is subject to considerable fluctuation. The serum lipase (esterase) shows a slight increase, reaching a maximum after three hours. The hepatic blood usually contains the lowest concentration of lipase.

The Pituitary Body.—"The evidence that the pituitary body is essential to life is now convincing," says The Journal of the American Medical Association. "Paulesco and Cushing, using an improved technic, showed that fatal results are to be expected from removal of the anterior lobe. Partial removal of the anterior lobe led to striking changes in metabolism. The knowledge that extracts of the anterior lobe, which is glandular in structure, are without marked immediate effects when injected intravenously, whereas extracts of the posterior lobe, which is a nervous structure, produce striking immediate results, is very interesting when one considers that removal of the posterior lobe is compatible with life, while removal of the anterior lobe terminates fatally. Feeding experiments have not been wholly satisfactory. Wulzen has recently found that when young fowls were fed with anterior lobe substance a retardation of growth resulted. This effect was especially marked in males.

"From a therapeutic point of view the most striking results have come from the administration of posterior lobe extracts. Favorable results have been reported by many from the use of posterior lobe extracts in the treatment of post-partum hemorrhage, uterine inertia and post-operative shock; on the other hand, its use in labor is in certain cases followed by grave results, rupture of the uterus being reported after the repeated administration of some commercial preparations.

"The recent work from the Hygienic Laboratory by Roth of the Public Health Service on the standardization of pituitary extracts may throw some light on some of the results obtained in therapeutics. Roth examined preparations obtained from six different manufacturers and found that the activity of commercial posterior lobe extracts varied widely when tested by three different methods, their relative activity on the isolated uterus of the guinea-pig being as 7:5 to 1. The commercial preparations which have been responsible for untoward results have therefore been shown to be exceedingly active ones. Roth could assign no positive reason for such great variability. He concludes that there is need for uniformity in the strength of commercial pituitary preparations, and to bring this about advocates their standardization on the isolated uterus of the virgin guinea-pig, suggesting an arbitrary standard. He further suggests that clinical studies should then be made to determine the therapeutic dosage."

Bacillus Coli Communis in Blood of Man.—During routine bacteriological examinations of blood at the Philipine General Hospital, four cases of blood infection by bacillus coli communis came under Ruediger's observation. Two of the cases proved fatal and two ended in recovery.

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No. 1

EDITORIAL.

THE INDEX.

This issue of the JOURNAL contains a complete index of Volume XII from January to December, 1914. All original articles are indexed from the leading title and crossed indexed so that it will be of value to any physician writing articles to readily refer to any subject desired. County societies and reports of officers of the Association are indexed and they can be used by the secretaries in preserving their records and for references.

All physicians who have written or discussed articles are listed in the Index as well as those who have attended or taken active part in the discussions.

RUSSELL COUNTY.

The December 15 JOURNAL contains the minutes of the 25th Anniversary of the Russell County Medical Society. Dr. J. B. Scholl read a most interesting paper on its history in which he stated that he was the only living charter member. Dr. Scholl is one of the younger and most active members of the profession of the State and it seems curious to think of him being the oldest physician in Russell county.

The Russell County Medical Society has the largest membership in its history, and its success is brought to the attention of other counties in the State because it is so richly deserved. They have good doctors, regular meetings, good programs and are doing real work to improve health conditions in their county. When it is considered that there is not a railroad nor a turn pike in this county, the example of Dr. Scholl and his associates is cordially commended to the organization in other counties with the hope that it will stimulate all of us to do our best work during 1915.

ANNUAL DUES.

As every member of the JOURNAL knows, each of you are an owner of it. Each of you are equally responsible not only for its maintenance and support but also for the character and extent of its scientific and other contents. We feel that our JOURNAL is the peculiar pride of the medical profession of Kentucky. Its democracy is evidenced by the fact that no contribution from a member of any county society of the State has been refused publication in ten years. Its integrity is evidenced by the fact that its Council stands ready to pay in cash for any failure on the part of any one of its advertisers to carry out in good faith any statement that they make in its advertisements.

In wishing a Happy New Year to each of you, the JOURNAL desires to take this opportunity for calling to your attention the larger importance of the local work you are doing in your county societies. We are sure you will be interested in knowing that every school child in Kentucky is being taught that competent doctors are practically always members of and regular attendants at their County Medical Society. We urge that each of you, who have not always had the constant stimulus to be gotten from regularly rubbing against your fellows at these meetings, will begin to participate in a real organization in your county. More county societies are doing actual work than ever before but there are still too many of them which are mere paper organizations and do no good to anybody. Will you not try to make your county society a more effective one this year? With this idea in view, begin now by sending your State dues of \$3.00 in addition to your county dues, which vary in the different counties, to your county secretary to-day so that your county may be one of, at least, fifty, which will have their dues in the hands of the State Secretary by January 1st. It is well to remember that these dues not only pay for your State mem-

bership but also bring all the issues of the JOURNAL, and give you all the protection the courts can afford against unjust malpractice suits, as well as increasing your prestige and standing with your people at home and with the profession of the United States as a whole. It is important to remember that no doctor will be accepted for reciprocity from Kentucky to any state in the Union, who is not a member in good standing in his county medical society and recommended by it.

Let's all pull hard and pull all together to make 1915 the best year in the history of Kentucky medicine, and to make the Louisville session the best and biggest any State Association has ever had.

DIPHtheria ANTITOXIN.

For a number of years the State Board of Health has been securing for the citizens of this Commonwealth high-class diphtheria antitoxin at the lowest possible price. Alexander's diphtheria antitoxin has been shipped from the laboratory of the State Board of Health at Bowling Green at exactly the wholesale cost. This plan has saved thousands of dollars to the people, while indigents in the ordinary sense of the term, could not afford to pay the regular retail price. Many cases of diphtheria have been prevented by this plan and many other cases cured.

In order to make the diphtheria antitoxin more quickly available to our profession and people, the State Board of Health has authorized the Alexander firm to arrange for a number of distributing stations which will distribute through the stations at the following conveniently located cities: Louisville, Lexington, Newport, Paducah, Henderson and Pineville. The antitoxin will be sold from these distributing stations at the same prices and upon the same terms as from the Laboratory of the State Board of Health at Bowling Green. Frequent inspections of these stations will be made by the State Board and the requirements that the antitoxin be kept in clean refrigerators; and that an adequate supply be kept on hand of reliable material will be enforced.

The mortality from diphtheria is higher in Kentucky than in any other state in the Union. This can only be because antitoxin is not used promptly. It is important for our members to remember that the Medical Defense Committee has ruled that it will not defend a member sued for malpractice for failure to use diphtheria antitoxin in a case of diphtheria as soon as the antitoxin can be obtained. The State Board of Health especially recommends that no child suspected of having diphtheria shall be permitted to mingle with

well children and especially not allowed to attend school or Sunday School until, at least, two negative reports have been received from the State Laboratory at Bowling Green. Containers for the examination of swabs from the throat of children with diphtheria can be secured at any time and these examinations are made without cost. We trust the physicians of Kentucky will take advantage of this opportunity to save our citizens the great difference between the price of the State Board of Health antitoxin and the same product sold at the regular retail price.

In this issue of the JOURNAL the announcement of the Alexander firm goes into the matter with a little more detail and we urge our readers to give it the attention its importance deserves.

SOUTHERN MEDICAL ASSOCIATION.

Those Kentucky physicians who were fortunate enough to be in attendance at the recent session of the Southern Medical Association in Richmond, Virginia, repeatedly expressed themselves as sincerely regretting that, at least, several hundred of our Kentucky brethren were not present to participate in the good times that were lavished upon them. Approximately, a thousand physicians were present and every Southern state was represented. The scientific sessions were excellent; in fact, we do not recall any previous medical gathering where the proportion between essays and discussions was so accurately balanced. The program never seemed to lag for an instant. The peculiar problems before the medical profession of the South were all brought up and the sincere interest and thought, and what is far more important, real work, which is being devoted to their solution was in evidence everywhere. For example, the discussions in regard to pellagra brought no real conclusions but presented a mass of testimony which will be of value in finally reaching the real cause of this baffling disease.

The presidential address of Dr. Stuart McGuire was particularly noteworthy. The ordinary presidential address is a pretty tame affair, but Dr. McGuire presented a real message direct from the heart and brain of one of the greatest constructive statesmen in the profession and after it has been published in the *Southern Medical Journal*, it is our purpose to re-publish it in this JOURNAL so that all of our readers may have the benefit of it. Another special address was that of Dr. Cary T. Grayson, of Medical Corps of the United States Navy, on the old-time physician. It seems particularly fitting that Dr. Grayson, young, athletic, the personal and family physician of the President of the United States, representing all that is most modern in pro-

professional thought and action, should have laid this tribute to the memory of the great family physicians of the past.

Those of our members who are also members of the Southern Medical Association and who receive regularly the *Southern Medical Journal* will read with great pleasure and profit the scientific proceedings of this gathering. Those who have not yet become members, the JOURNAL extends a hearty invitation for you to send your check for \$3.00 to Dr. Seale Harris, the secretary, at Mobile, Alabama, and you will receive from him during 1915 twelve *Southern Medical Journals* each of which will be worth far more to you than the price of all. Only members in good standing in their county society are eligible to membership in the Southern Medical Association.

SCIENTIFIC EDITORIALS.

NERVOUSNESS IN CHILDREN.

That the American people as a nation are characterized by nervousness is the general verdict of the people, and that this nervousness is on the increase is affirmed by the leading neurologists. We may lay the blame of this on climatic conditions, the massing of people, the increasing of urban population, the high tension of business, and the strain and stress of keen competition in all walks of life. But whatever our explanation of the fact it may be conceded that the beginning of nervousness dates in childhood. It is our duty, therefore, to give some consideration to the causes of nervousness in children. We hope that we may be able to remove certain of these factors and thus secure a saner and healthier youth and old age.

The prevailing trouble with American people affects the child equally,—the tremendous hurry that seems to predominate our lives. There is the rush to get through the meal, the rush for the street car, the rush to get to school on time, the rush to extra lessons, the parties or diversions. And thus the day has been spent without any calmness or repose. When this is kept up throughout the school years of a child is it any wonder that the nerve tension gets to the breaking point.

Nervousness may be only an expression of this storm and stress through which the child is passing, or it may be the beginning of organic nerve disease, or it may aggravate or intensify the difficulties and dangers of any of the childhood disorders not necessarily marked by nervous symptoms.

Certain of the factors in the production of nervousness cannot wholly be removed in the present state of our civilization. The rush of

life is ministered by all of the agencies in modern civilization; the telephone, the telegraph, the street car, the automobile, the morning paper, all intensify the demand upon our nerve resource. The child starts on the way to school in the morning keyed up by the strenuous life at home aided and abetted by the dangers to life and limb on every street, supervised, if not nagged all day by a nervous teacher until the tired jangled nerves hardly get relief from the sleep which is broken by street cars, fire engines, night hawks, joy riders, and the early milk man. These are the conditions that confront us and apparently cannot be removed. But the parent should be instructed by the physician to minimize in every possible way the friction that comes in every household. A self-controlled father and mother and well controlled children develop the power of inhibition that enables the child or adult to resist the impulses which impinge upon the central nervous system. Nervous energy is conserved because it is not wasted upon every excitement which may reach the organization.

The child should be taught early not to give way to every passing thrill. The inhibitory centers of the brain should be called into play early in controlling any outward manifestations of nervousness or excitability. A child who controls itself and one who gives rein to every excito-motor impulse show a differentiation which in late life may mean the difference between a sane and an insane career. It is necessary for a father and mother to exercise self control in order that they may teach their children self-control. An excitable temperamental mother makes it increasingly difficult for a child to develop inhibitory mechanism. Perhaps it is not too much to say that this self-control of the mother should be especially emphasized during gestation.

Conservation of nerve force, of strength and energy is best attained by regularity and order in the day's labor. The child who learns early to do routine work in a routine day is saved much friction. The regularity of meals, of exercise, of diversion and of play lessens the wear and tear. The modern business doctrine of efficiency tends to eliminate all the extraneous losses of time and strength. The same should be applied to the daily life of a child. Unnecessary worry over lessons and other things which break into a child's life use up vital energy. Fatigue from overplay, from over study, loss of sleep, improper food, eating too hurriedly, all take their toll in a child's nervous energy. Many nervous children are made so by too great demands upon their strength, the number of things they have to do in a day. The city child with its hours in school, its special lessons in music,

language and dancing in the afternoon, moving picture shows, and frequent parties leads a strenuous life and lays the foundation for an unstable nervous system in later life.

Parents feel that their children should be amused; they often over-stimulate a child's brain because they feel that a child should be entertained. "Happy is the nation that has no history," may be paraphrased, happy and fortunate is the childhood that has no excitement.

PHILIP F. BARBOUR.

WHAT IS THE CAUSE OF FEVER IN LATE OR TERTIARY SYPHILIS?

One of the readers of our STATE MEDICAL JOURNAL proposed this question. The reader, a country physician, who is a keen observer as a good many country physicians are, should be congratulated, as he is only one of the few physicians who noticed this unusual phenomenon in tertiary syphilis.

It was thought for a while that syphilites in the primary or secondary stage were wont to have fever. In the last few years attention has been drawn by some syphilographers that fever may be met with in the tertiary stage of syphilis. Mention is even made as far back as 1866 by Lancereaux, and in the seventies by several other writers. In the last few years this question came up again and quite many reports as to this occurrence are found in the medical literature. The question as to the causation of fever in the tertiary stage of syphilis has been asked frequently, but no definite or scientific answer has been given. Different theories were proposed, but all failed to give a true solution as to its cause.

What is then, the real cause of fever in late syphilis? Kirchheim, Schlegelmann, Sobernheim and Stern are in accord with the great Fournier and attributed this phenomenon to accidental infection. But this theory must be repudiated since accidental infection, with fever following, would hardly yield to mercury treatment. A good many other theories have been proposed but all of them have been found wanting. Baumher's and Klamperer's theory that fever may be caused by absorption of necrotic masses is contradicted by the prompt and rapid influence of mercury therapy.

The most plausible theory was lately advanced by Jerome, Westphalen, Jordon and others that fever in tertiary syphilis may be caused by the presence of spirochetæ and the toxins eliminated by them. Mannaberg claims that no matter in what phase a case of tertiary syphilis may appear, if febrile condition accompanies it, spirochetæ pallida can be found circulating in the blood. If this be true, then, there is no difference between the tertiary and secondary stage. In autopsies

on patients with tertiary syphilis Strassman found spirochetæ located in the central nervous system.

To me tertiary syphilis seems to be analogous to latent gonorrhœa. As in latent gonorrhœa the gonococci are often found to become active from some cause or other, so we find spirochetæ suddenly become active in tertiary syphilis, and the latter, like gonococci, may create a condition often accompanied by fever. In two cases of tertiary syphilis accompanied by febrile condition, spirochetæ were found by my assistant and pathologist. As the latter was very doubtful of the possibility of these cases being syphilis, the utmost care was used to prevent any possibility of contamination from the India ink used in staining. Several tests were made and spirochetæ were invariably found. The patients, previous to having undergone a Wasserman test, were treated for malaria, intestinal trouble, rheumatic fever and ambulant typhoid with antipyretic, antirheumatic remedies without any improvement, until antisyphilitic measures were adopted.

The question of the possibility of reinfection was entirely eliminated in our cases. Somehow we could never believe in the claims of syphilitic reinfection made by some writers. Tertiary syphilis, or we should rather say, neglected and uncured secondary stage, is like latent gonorrhœa, stubborn and not easily amenable to complete eradication. Even salvarsan which is claimed by its enthusiastic followers to be able to reach every and all pathological foci, has at times failed to fulfill its claims. Damage done by syphilis is far more serious than by chronic or latent gonorrhœa.

M. L. RAVITCH.

Arterial Hypertension and Hypotension.—In the management of hypertension cases Roberts disapproves of the use of vasodilators. If the tension is above the danger line and it is imperative that immediate action be taken to prevent hemorrhage or acute dilatation, then, he says, there is nothing which will give more immediate or lasting effect than to resort to venesection. In all cases with marked hypertension the patient should be put to bed, and the eliminative forces should be increased and all fluids restricted. A low protein diet should be ordered and all those conditions which are intensifying the hypertensive activity treated. For the management of those cases of hypertension in which the danger line has not been crossed, a select diet which is nutritious, but low in animal proteins, should be given. Massage, selective hydrotherapy and a systematic form of exercise, preferably taken in the open air, should be advised.

ORIGINAL ARTICLES

THE QUESTION OF CONTAGIOUS EYE DISEASES IN PUBLIC SCHOOLS OF LOUISVILLE.

By J. MORRISON RAY, Louisville.

I want to apologize to this society for offering you a subject for discussion that I thought had been permanently and thoroughly threshed out and settled a number of years ago. Yet when I recently heard the declaration made by men of the highest class training in health matters, that my ideas were incorrect and that what I had, from training, study and observation, been led to consider a very simple disease was in fact the first stage of one of the most destructive and obstinate eye diseases known to the ophthalmologist. I was perforce inclined to stop, look, listen and then take stock. My mind naturally reverted not only to what I had been taught and had read as the opinion of men of the best training and of long experience, but of my own personal observations.

In the thirty years of my work coming in daily contact with cases of conjunctival disease I cannot recall a single instance where a child in whom I had made the diagnosis of follicular catarrh of the conjunctiva, so-called follicular conjunctivitis had later shown the infallible signs of trachoma such as conjunctival cicatrization, pannus, or lid distortion.

While these pages were being written I saw Mrs. H., of Shelby county. In 1894 when she was twelve years old, she came to me with one of the most exaggerated conditions of folliculosis that I had ever seen, the lymphatic masses not only rolling out of the lower cul-de-sac the moment the lid was pulled down but the upper cul-de-sac was filled and in addition the inner caruncle and semilunar fold were covered with masses of lymphatic enlargement. The diagnosis I made was follicular trachoma but I was in some doubt as to its not being true trachoma. In order to be on the safe side I advised operation. This was rejected and local treatment requested. Under copper sulphate in stick, with alum and tannic acid drops, in a few months she was improved. I saw nothing more of the case. She came to me now with two small children, one of whom has a mild catarrhal conjunctivitis. Examination of the mother shows a perfectly normal conjunctiva without a single evidence of the former condition and with normal vision and comfort.

Diseases of the conjunctiva make up a large percentage of the eye diseases presenting for treatment, therefore their proper diagnosis and classification are of the utmost importance.

The difficulties encountered in differentiating between the different forms of conjunctival inflammation are many. In doing this we must consider the history, origin, symptoms, complications, duration and ultimate results. In investigating the history, the source of infection is often obtained. The presence of other cases in the same family, school or vicinity are of value. The condition of the eye and its surroundings, the character of discharge is present and the symptoms as obtained from the patient are important. The complications present are of the greatest value. The corneal involvement in trachoma is characteristic and pathognomonic and few cases of this affection last any length of time without showing corneal complications. I recently heard a well-known ophthalmic pathologist say he did not think trachoma could last longer than a year without giving evidences of its presence by characteristic corneal changes.

It is not my intention to discuss all the different forms of conjunctival inflammation to-night but to take up a study of two in which the differential diagnosis and course have been the bone of contention, recently, not only in this city but, I understand, in many other parts of our country. I refer to trachoma and folliculosis, or so-called follicular catarrh.

A great deal of the trouble in the differentiation of these two conditions arises from the confusion in the description, and want of proper classification, found in modern text books. I have recently carefully examined ten of the most widely known and exhaustive text books published and the very latest editions, and while they differentiate between the two conditions, the whole description is unsatisfactory and evasive. I doubt if any one can make a distinction, clinically, after having read the description found therein. This confusion of description and unwillingness to clearly commit themselves has given rise to the suggestion that the chapter on trachoma should be re-written. Even in hand atlases, I can present you to-night with illustrations of each condition, and I am sure the illustrations are confusing and interchangeable.

The following facts in regard to the disease under consideration I offer you to-night.

TRACHOMA.

Much of the confusion found in literature in regard to trachoma is due to the fact that it appears in somewhat different clinical types

* Read before Louisville Eye, Ear, Nose and Throat Society, November 12, 1914.

in different countries. For instance any one who will read the recent brochure by Macallen on Trachoma in Egypt, will see that there, it differs in many ways from what we know as trachoma, here.

He says the disease is found in very young children and is frequently ushered in by acute conjunctivitis. Furthermore that recent researches seem to show that trachoma of the genital passages occur, and that trachoma of the newly born is present as a result of infection in this way. He further says that in the acute conjunctival inflammation going with this, are found gonococci, as well as the Morax-Axenfeld diplo-bacillus, the Koch Weeks bacillus and various other organisms. In other words it is a mixed infection.

I think in this country we rarely see trachoma originate as an acute condition. In fact, the symptoms are often so slight that the sufferer never consults a physician until the hypertrophic stage is well advanced and the presence of corneal involvement forces the subject to seek relief. Yet on inquiry we find that the patient has had sensitive, weak eyes, when used, for some time. They water and get red in school work.

Boldt says that much confusion has originated because in the early study of the disease each investigator used not only a different name for the same thing but a different meaning for the same word to describe a similar condition, and not until Saemisch in 1876 made a sharp distinction between trachoma and follicular conjunctivitis were the two diseases studied with reference to their different pathology, etiology and course.

It is useless for me to trace the early knowledge of this disease farther than to say that most English and Continental writers regard its origin as following the Napoleonic campaign in Egypt. It has been known to exist there for centuries. It was, however, so confused with other forms of what, until modern times, was known as contagious ophthalmia that we have little of value save in a clinical way.

That trachoma is contagious has been admitted from the remotest time, notwithstanding the special organism that propagates it has not, up to the present, been discovered. In fact, no bacteriological studies made by competent observers have succeeded in discovering and experimentally demonstrating the presence of the micro-organism producing trachoma.

In 1882, Sattler announced the discovery of a diplococcus resembling the gonococcus of Neisser. This was followed by many others. Of those in which numerous inoculative experiments were made not one has been able to stand the test of inoculation. The more recent work of Halherstaedter and Von Prowa-

zek with the so-called "cell inclusion" have likewise failed in the crucial test. Notwithstanding all this, it has been conclusively shown that if a piece of trachomatous tissue be introduced into the healthy human conjunctiva there will be excited an acute conjunctivitis, which in a few months is followed by all the characteristics of true trachoma. Farther it has been shown that if the trachomatous material be filtered through a Berkefeld filter, that is thought to remove all known organisms, the juice remaining is still infectious if placed in the cul-de-sac of either man or the higher species of monkey.

FOLLICULOSIS, SO-CALLED FOLLICULAR CONJUNCTIVITIS.

There is found scattered through certain parts of the conjunctiva immediately underlying the epithelium numerous minute collections of lymph cells. In structure they do not differ from solitary follicles in the mucous membrane in other parts. Under normal conditions and most frequently during the growth of the child, that is from three to twelve years of age, these cells aggregate into lymph follicles. As a result of this the condition has been likened to adenoid and tonsil development, since they are frequently associated, and if no infection occurs, follow the same retrogression. Parsons says they are pathologically allied conditions.

They give rise to no symptoms calling for examination of the eyes and if the child has no other intercurrent eye disease, may never be noticed. That they are found in from ten to twenty-five per cent of all children in institutions I can vouch for. I presume the reason for this is that in such places the eyes are more often examined.

Stephenson says, "In my own mind I have no doubt that the follicular condition is in many instances natural to the conjunctiva of young subjects." He farther says of 14,797 school children that he examined, 13,908 showed follicles in different degrees of intensity and none of these were in parochial schools.

I have had under my observation for twenty five years or more two institutions with children from five to fourteen years of age, and so-called follicular conjunctivitis has been the most common eye condition found. I have only treated the cases when an acute infection was engrafted onto the follicles.

This condition of folliculosis rarely gives rise to symptoms and if no acute infection supervenes the child passes to the age when, like tonsils and adenoids, they retrograde, leaving a perfectly healthy conjunctival membrane, with no disturbance of the lid and no cicatrization.

Axenfeld, probably the widest known oph-

thalmic pathologist and bacteriologist says simple, harmless, conjunctival follicles, such as are so often found in school children may give rise to the impression of trachoma but only when associated with an acute catarrh are they contagious.

Now, the differential diagnosis between this condition and trachoma is the one absorbing topic in school inspection of children's eyes, and on its proper recognition, depends the question of the prevalence of contagious eye diseases, to any large extent, in our public schools.

The local appearance in each disease as I have seen it is about as follows:

In trachoma the conjunctival membrane throughout its extent is thickened; the so-called trachoma follicles seem to be more or less imbedded in thickened conjunctiva; no isolated blood vessels can be seen; the follicles appear anywhere on the conjunctiva but usually more abundant in the upper cul-de-sac, but always more or less on the tarsal conjunctiva, with it there is thickening of the lid substance. This condition is often found where the patient has not complained of eye discomfort. It may occur at any age but is more commonly seen in adults.

Folliculosis is found in children, seldom after fourteen years. It is rarely accompanied by symptoms unless there is added an infection; the conjunctiva retains its translucency; when the lid is pulled down a mass of follicles roll into view, usually more or less symmetrically arranged in rows; there are well-defined spaces between the follicles, where the conjunctiva often appears normal and blood vessels can be seen. These follicles are sometimes seen in the upper cul-de-sac and occasionally as round semi-transparent isolated nodules, that do not coalesce on the conjunctiva of the upper lid and around the caruncle and semilunar folds. With this in uncomplicated cases the remainder of the conjunctiva has its normal appearance and the blood vessels can be distinctly defined; the lid substance is not thickened and the unaffected portion of the conjunctiva is shiny and glazy.

So much for these points in differentiation.

I will admit there are often cases when from one examination the diagnosis cannot be certainly made. This is most often in folliculosis with an added infection but if the case be watched for a few weeks the diagnosis can be positively made.

In the crusade started several years ago in New York against contagious eye diseases, the question as to what was true trachoma came to the front and I am personally informed by one of the ophthalmologists acting as consultant to the health department that the majority of cases submitted to operation were cases

of follicular conjunctivitis and would have gotten well without operation.

Dr. Anna Williams, in a paper on trachoma in New York City schools, says four thousand cases were examined by the Research Laboratory of the Health Department. If all the cases cured were true trachoma, then practically all cases of trachoma, from the beginning, have been cured in a comparatively short time. If they were not true trachoma then there is practically no trachoma in lower New York, the reputed hot bed of this infection.

In the discussion of this paper Drs. Reese and Wooten were strongly of the opinion that so-called follicular conjunctivitis never terminates in cicatrization or corneal involvement, yet they both stated that in cases of folliculosis which had been operated upon, often the scar tissue resulting from the operation produced corneal involvement and damaged eyes resulted.

I desire to submit the following propositions that to me seem tenable.

Trachoma is a specific infectious inflammation of the conjunctiva.

It appears at all ages from the cradle to the grave.

No country is exempt, yet certain individuals and certain races present a certain immunity.

It is contagious by direct transmission only of the secretion from an infected eye to a healthy eye of another.

The activity of the contagion depends largely upon the presence of a secretion.

Trachoma, if untreated, leads in time to serious secondary changes, so-called sequellae. These are characteristic and pathognomonic.

No known treatment and no operative interference is sure to promptly cure the case at any stage of its career, and it is subject to relapses.

Trachoma being a specific infection due to a micro-organism cannot arise *de novo* and cannot result from the gradual evolution of any other conjunctival condition.

Folliculosis or follicular conjunctivitis, is a condition found in children.

It is often associated with the so-called lymphatic diathesis, tonsils and adenoids, and disappears in time without treatment and with a normal conjunctiva remaining.

It cannot be the first stage of a trachoma development since it has been known to disappear without treatment, and of all the different organisms that have been claimed as the specific agent in trachoma, no observer has found them in any number of cases known to be of the follicular type.

Folliculosis develops in the eyes of children as the result of local irritation and bad hy-

gienic surroundings, and can be produced in the eyes of susceptible adults by local applications, such as is seen after long use of atropine, eserine and other local agents.

If these conclusions are true there is no ground for the alarming statement as to the great amount of trachoma in the schools. There has been simply revealed many cases of a harmless condition of which the patient was unaware. These children are not threatened by any life long disability or blindness and I would emphasize the statement that it is unscientific and harmful to the best interests of both the profession and the laity to create a fear as to the existence of a disease the danger from which are largely imaginary.

In conclusion I wish to state that true trachoma has been known to exist in certain localities or districts in this state for many years. In 1894 I wrote the late Dr. Swan Burnett on this point as follows: There is prevalent in certain localities in this state a form of trachoma frequently non-inflammatory in its early stages but eventually producing enormous thickening of the lids, great corneal vascularity and much deformity from conjunctival cicatrization. In fact this condition, I am told, was so well recognized in Cincinnati that it had been styled "Kentucky Trachoma."

DISCUSSION.

J. McMullen: I wish to thank this society for the privilege of being present this evening and hearing the splendid paper read by Dr. Ray, to which I have listened with great interest.

The essayist evidently recognizes the numerous difficulties sometimes encountered in both the diagnosis and treatment of trachoma. In examining the eyes of emigrants on Ellis Island, where I was stationed for seven or eight years, it was a very serious matter to report that the individual had trachoma, as this disease carried with it the sentence of dismissal from the country. Trachoma is one of the mandatorily deportable maladies. In justice to the individual, therefore, we always endeavored to differentiate between true trachoma and the various conjunctival diseases which sometimes simulate it so closely. In my present work in the Kentucky mountains I have also attempted in all cases to differentiate between folliculosis and trachoma.

It is most unfortunate that at present the diagnosis of trachoma must be based absolutely upon the observed clinical manifestations plus the personal opinion of the examiner. This is the cause of much of the existing confusion, because the etiology of the disease is unknown and every man is entitled to his opinion whatever it may be. Trachoma is presumed to be due to a specific bacterium, but unfortunately it has not yet been isolated and described; and until the etiology is definitely understood confusion and discussion

will necessarily continue as to what is and what is not true trachoma. In this part of the country it seems to me if the disease be treated and cured, whether it be follicular conjunctivitis or trachoma matters little from the standpoint of the patient, so long as proper relief is obtained. On Ellis Island, however, the diagnosis of trachoma makes considerable difference to the individual who is an alien knocking for admittance, and it was my habit while there to keep the patient under observation in the hospital for several days or weeks in order to settle the question of diagnosis if possible.

As we all know simple conjunctivitis will ordinarily disappear in a short time under appropriate treatment. The most puzzling cases are those where an acute conjunctiva is engrafted upon trachoma, so to speak; but by the institution of proper treatment the conjunctival hypertrophy may to a certain extent be reduced, and we are then able to determine whether the underlying trouble is trachoma.

It has always seemed to me that where it can be accomplished without the infliction of sufficient traumatism to produce cicatrization and subsequent corneal complications, aggravated cases of follicular conjunctivitis might be advantageously accorded treatment somewhat similar to that applied in true trachoma, viz; some form of operation. Such treatment, carefully applied could do the patient no harm, and if the disease really be trachoma much good may be accomplished, although a cure may not result from the first operation.

All of us who are familiar with trachoma have doubtless observed extreme cases in which the condition of the patient was most pathetic from corneal complications, deformity of the lids, photophobia and practical blindness. The potentialities of trachoma are so great that we are certainly not justified in withholding treatment in any case where we even suspect it, because we know the disease is not only destructive to the vision of the individual but is also communicable from one person to another. In the campaign I am conducting against trachoma in this State it is my desire that the people know that the malady is dangerous, I prefer to have them alarmed so they will return for treatment, otherwise they are prone not to do so. Adults would only seek treatment when they became unable to longer work in the fields, and would bring their children only when they were in such condition that they could no longer attend school. I am sure Dr. Ray fully appreciates the difficulty in curing trachoma where there is extensive hypertrophy with deep-seated granulations and an abundance of cicatrization such as occurs in the late cases. It has been my experience that follicular conjunctivitis is not followed by cicatrization nor corneal involvement unless these complications are caused by unwise methods of treatment.

It would appear that the combined designation

follicular-trachoma is distinctly misleading and should be abandoned, unless by this expression we actually mean trachoma, because the word trachoma implies so much more than follicular conjunctivitis. Although I may be accused of being biased, I believe trachoma is an exceedingly serious affection, and is not to be compared with follicular conjunctivitis. In the mountains where I have been working for the last year or two, and where hundreds of cases of trachoma have been seen and treated, these fine points in diagnosis do not bother us very much. Of course we all recognize that in typical advanced cases there is no difficulty in making an accurate diagnosis of trachoma, but it is frequently difficult to effect a cure.

Two years ago, I examined the school children of seven or eight mountain counties, I remember in one school the teacher had undoubted trachoma, and several of his children were suffering from the same disease. When I returned to the mountains last winter to establish the hospital at Jackson, Ky., I saw a patient who said he had been waiting a long time for us to build that hospital because he wanted to be treated. I found that he had a very severe case of trachoma, with pannus and marked photophobia. A local physician, well acquainted with the patient, told me the trachomatous school teacher I saw two years before had died, and this man married his widow and had since lived with this trachomatous family. The doctor assured me that the patient had absolutely no evidence of trachoma nor even a conjunctivitis previously, that two or three weeks after marrying the widow he began to have eye trouble which had rapidly developed. There was first noted a "watering of the eyes," the secretion soon becoming profuse and semi-purulent, and was followed by photophobia and corneal development.

It seems to me this affords a very good illustration of the beginning of trachoma. We are frequently asked how trachoma begins. Personally, I believe it always commences with symptoms not unlike those of acute conjunctivitis. There must certainly be an acute stage, i.e., it does not begin as a chronic affection. I believe, however, that trachoma is essentially a separate and distinct disease. These may be speculations not based upon anything particularly scientific, but they are in strict accord with my clinical observations. Trachoma is seen in various stages, from its inception to the sclerotic stage with corneal involvement, ectropion, entropion, etc., the condition of the patient being pathetic in the extreme. In my opinion there is but one kind of trachoma, and while Fuchs and others describe two or three varieties, viz., granular, papillary and cicatricial, they are one and the same thing observed in the different stages.

My work in the mountains is to me so extremely interesting that I hope I may be pardoned for further allusion thereto: Two years ago at the

request and with the co-operation of the State Board of Health, I examined about 4000 people in Eastern Kentucky, the majority of them school children, and 500, or 12 1-2 per cent. had undoubted trachoma according to my diagnosis. These were all cases that I believe would be accepted as trachoma by anyone familiar with the disease. Quite recently my assistant has examined nearly 9000 people in eight or ten other counties in the southeastern section of the State. Of 7356 school children examined he found that 370 had trachoma, or about 5 per cent. Of 593 people examined outside the schools he found 91 had trachoma or about 16 per cent. In making these examinations outside the schools, the people get the impression that an "eye doctor is coming around," and only those with eye symptoms come to be examined, which of course gives a larger percentage of trachoma in other people than in school children. For instance, in one of the bluegrass counties I recently examined 409 school children and found that 10 had trachoma, or 2.4 per cent; of 55 people examined outside the schools in the same county 27 per cent had trachoma.

The reason for the increase of trachoma in Kentucky is not difficult to understand. Railroad facilities are being constantly extended, and the trachomatous native thus finding an outlet migrate to other places where the disease finds virgin soil. I wish to emphasize the statement that the people of the mountain counties of Kentucky are splendid people, being honest, upright, and intelligent. I ought to be in position to know, since I have practically lived with them for two years. I regret to say, however, that some of them continue to live in an unsanitary way, using the same towels, etc., and trachoma is thus disseminated.

The U. S. Public Health Service now has three hospitals in the Kentucky mountain regions, one located at Jackson, one at Hindman, and one at Hyden. Satisfactory results are being secured in the treatment of trachoma in all of these hospitals, and a cordial invitation is extended to every member of this society to visit any one or all of them. If notified in advance I shall be pleased to arrange a special clinic for that day. I think I will be able to show you patients illustrating every stage of trachoma, and in whom there is absolutely no question as to the correctness of the diagnosis. Of course we see a great deal more trachoma in the mountains than you gentlemen do in Louisville, although I am sure Dr. Ray and others here have seen and treated many such cases. At a recent meeting of the Virginia Medical Society I was rather surprised to hear the majority of the eye men present say they saw practically no cases of trachoma in their practice in Virginia. I am quite sure the disease is prevalent in the southwestern part of the state, but it may be uncommon around Richmond.

S. G. Dabney: I have enjoyed Dr. Ray's paper

very much, and have little to add. While our opinions may sometimes be at variance in regard to the early diagnosis of trachoma, there is rarely any difference in the contagious stage of the disease. We doubtless all agree that conjunctival inflammation attended with little or no secretion is non-contagious and non-communicable. Conjunctival inflammation with insufficient secretion to cause adhesion of the eyelids in the morning is common, and no one could reasonably claim that such cases are contagious. Fortunately border line cases, about which men of equal experience oftentimes differ as to the diagnosis, are generally those in which the disease is least likely to be conveyed from one person to another.

The members of this society are familiar with my views upon this subject. I am decidedly "on the fence" concerning our ability to make an accurate diagnosis in all stages of trachoma, although like Dr. Ray for many years I thought the diagnosis was easy. Since talking with Dr. Moore, on his first visit to Louisville in connection with the trachoma investigation, my thoughts have been directed along different channels; I have never ceased thinking, and the more I consider the matter the more doubtful I am about our ability to make an accurate diagnosis in the early stages of trachoma. It is no proof that the disease is not trachoma, because spontaneous recovery occurs in certain cases, as that is true of every disease. Allusion is made to this fact by May in his book issued this year, and similar statements are made in other books on the subject.

Like the gentleman who preceded me, I have for some time believed that the ultimate solution of the diagnosis of trachoma must rest with the laboratory. However, I am sometimes a little skeptical about laboratory diagnosis, and do not believe they should be invariably accepted as final without giving due consideration to the clinical history. Until the etiology of trachoma is known, that is until the micro-organism has been isolated and we know the cause of the disease we are going to continue to blunder in our diagnosis.

It has seemed to me that perhaps the wisest plan would be to treat doubtful cases as trachoma, but there are serious objections to this method especially in private practice. Patients in moderate circumstances cannot afford to enter the hospital for operation, and seriously object to doing so unless it becomes absolutely necessary and they should not be made to incur needless expense in doubtful non-contagious cases. Since our last discussion I have seen several cases of what might be considered doubtful trachoma, and the patients all improved under conservative treatment. I have operated in only one doubtful but in my opinion, non-contagious case, the patient being a school boy less than ten years of age. I do not believe he had trachoma and the only excuse for operating upon him was that he

had been taken out of school and removal of adenoids and diseased tonsils was necessary and I thought it wise at the same time to "roll" the eyelids. There was no conjunctival secretion, and if the boy had trachoma it was not in my opinion in the communicable stage.

Another case seemed to be one of very mild follicular conjunctivitis, I called my office neighbor, Dr. Levi, in to see it. To him also it seemed not at all like what we generally call trachoma, but it is a very significant fact that this patient a little girl of about ten, had an older sister with typical severe trachoma with pannus and corneal ulcers.

Remembering Dr. Moore's remarks on just this line of cases I cannot but wonder whether long observation would not find the little girl developing a genuine trachoma like her older sister. As Dr. McMullen has said the diagnosis of trachoma, at present, can only be a matter of personal opinion.

It will not surprise me if in the future, when the etiology of this disease has been discovered, we shall find it necessary to rewrite this whole chapter. To my mind we will probably find that cases of trachoma may at one stage be communicable and at another free from this danger; that some cases will recover with little or no treatment and others will develop into very serious complications possibly resulting in blindness.

We will hope then to have positive knowledge as to when the disease is actually cured—a knowledge which we sadly lack just now.

It will not surprise me too if, when that time comes we find that follicular conjunctivitis and trachoma are one and the same disease of different types and in different stages, but having the same underlying cause and practically the same pathology. No more convincing proof of the present unsettled state of mind as to this question can be found than in the diagnosis of the children exhibited here to-night. On one side we will find several gentlemen, of large experience and wide reading, positive that these children have not trachoma. On the other side, we will find others of equally large experience and who have devoted long and special study to this disease, of the opinion that these children have trachoma.

I. Lederman: As I have been working in conjunction with Dr. Ray, and making the same observations he has, quite naturally I agree fully in the conclusion he has formulated.

A marked distinction should be made between the work of public health men who visit us for a day or two and hurriedly make the diagnosis of trachoma, and the physicians who keep the patients under observation for a considerable length of time. While there are many border line cases, I think those of us who watch the patients for an extended period are in better position to make an accurate diagnosis than a man who only sees the patient once.

I have previously expressed my views before this society in regard to the inaccuracy of some of the observations made by Dr. Moore while here. My remarks concerning his work, however, are made with the utmost friendly feeling, as I have the greatest admiration for him. He is a gentleman in every respect, although we may totally disagree in the diagnosis of trachoma. Some of the cases which he diagnosed as trachoma were under my care, and the patients recovered within a few months under conservative treatment. Had he been able to observe these patients for a longer period, I am quite sure no diagnostic errors would have occurred; so after all it largely depends upon the men who watch the patients, and I believe this is the only way we can determine whether or not the disease is really trachoma. Of course we are at a disadvantage in that the diagnosis must be based solely upon the clinical manifestations, as we are able to obtain no assistance from the microscope.

One phase of the subject which I had hoped Dr. McMullen would discuss more at length is the trachoma situation in reference to the public schools. The majority of those present have heard numerous discussions upon this subject, and I am glad the school inspectors are here to-night. The committee appointed by the chairman of this society has met with the school inspectors, and has taken the position that it is unwise for them to create the impression among the school children that there is a widespread epidemic of trachoma. We have recommended that they refrain from making a positive diagnosis even in cases where they are morally certain the disease is trachoma. The objection from their standpoint (and I hope we shall hear from them to-night), is that treatment cannot be enforced unless they make this diagnosis. It seems to me there ought to be some way of enforcing treatment by the civil authorities. I believe our advice to them has been proper and conservative, that in doubtful cases where according to their judgment the children should be kept out of school and be referred to the specialist for attention and treatment, that these cases should be labeled conjunctivitis; and where they are certain the children have trachoma, they should say it is probably trachoma, or suspicious of trachoma. We have all had the experience of children being sent to us by the school inspectors with the diagnosis of trachoma, and are familiar with the panic this diagnosis has created among the parents who feel that trachoma is a disease of which they should be ashamed. The majority of these patients are found to be suffering from a mild form of follicular conjunctivitis without inflammation, simply presenting a few isolated follicles. Many of them are children with adenoids and enlarged tonsils, and few require operation, the majority of them getting well under simple treatment.

This is a phase of the subject upon which I would like to have heard more from Dr. McMul-

len. In the mountain cases he sees there is probably no question as to accuracy in diagnosis, and they all undoubtedly represent well marked trachoma. We see such cases oftentimes in Louisville.

With reference to Dr. Dabney's remarks about our having so many border line cases: While I will admit that we should isolate and treat these cases as trachoma, yet this disease is not always as contagious as has been commonly supposed. In substantiation of this statement I will mention a family recently observed. A girl living in Highland Park, whose parents migrated from some interior town in Kentucky, applied to one of our city opticians for glasses. He recognized that it was a case requiring treatment, and refused to examine her. The patient then came under my observation. This girl had one-sided trachoma in the transitional stage between hypertrophy and cicatrization, with marked pannus. She had received no treatment and had not complained of any eye trouble excepting impairment of vision in that eye. The other eye was unaffected, both the cornea and conjunctiva being normal. The father of this girl, who accompanied her, had bilateral trachoma in the cicatricial stage, there were no follicles to be seen on examination, but there was slight ptosis of both lids with the characteristic cicatricial line on the conjunctiva, showing that he had passed through true trachoma. At my request the mother and the three other members of the family were brought for examination. Every one had absolutely normal cornea and conjunctiva. They are people in the lower walks of life who know nothing of sanitary and hygienic precautions.

In connection with the foregoing, we know that follicular conjunctivitis often occurs in more than one member of the family; but the fact that there are two or three children with follicular conjunctival affections in the same family is no proof that the disease is trachoma. Such instances are not unusual from the simple fact that the children are of the same general type and temperament, living in the same hygienic surroundings and environment, eating the same character of food, etc.

In the diagnosis and treatment of trachoma, we are certainly "up against" a difficult proposition, and while we would all like to be conservative, at the same time I admit that all doubtful cases should be isolated and treated as trachoma until we are certain of the diagnosis.

J. R. Wright: I have enjoyed Dr. Ray's paper very much, and there seems little to be added. I have never understood why the disease under discussion happened to be called trachoma, unless it is because the name has simply been handed down to us from previous generations. As is well known, the term trachoma merely means something which is rough, i.e., a roughened surface, and has no more reference to the conjunctiva than any other portion of the human organism.

It seems to me we should adopt a more distinctive name, one which would at least indicate the pathology present and the anatomical situation. Dr. Rose, of New York, has suggested the name epiphephyctitis, but I must confess this is a hard term "to digest" and I do not know whether it really means all it sounds like or not! It appears to me, however, that a disease which can create so much trouble as trachoma ought to have a name which would in some measure indicate the condition that really exists. While of course in trachoma the eyelids are rough, that is all the term signifies.

I would like to hear something more about the treatment of trachoma. The discussion thus far has been confined almost entirely to the differential diagnosis. If anyone can enlighten us in regard to the treatment, I am sure we would all appreciate it.

G. C. Hall: I have thoroughly enjoyed the excellent paper read by Dr. Ray. All border line cases where no one can positively determine whether or not the disease is trachoma, and whether there will eventually result cicatricial changes of the conjunctiva, corneal involvement, etc., I believe should be isolated and treated as trachoma.

In another class, while there is but slight inflammation and little secretion, marked granulations occur in both the lower and upper cul de sacs. I have seen a number of such cases, and while they yielded to conservative treatment, I am convinced they were cases of true trachoma. I believe that in this, as in every other disease, there are various degrees of severity, and it would be just as fallacious to exclude all these cases in making the diagnosis of trachoma as it would to include all cases of follicular conjunctivitis in the diagnosis of trachoma.

In my opinion all cases where there are marked granulations especially in the upper cul de sac should be treated as trachoma. We know that patients with trachoma, as well as other diseases, sometimes recover with little or no treatment, but this observation is of no especial importance in connection with the diagnosis. We all see trachoma in its various stages, and some patients will get well without operative treatment, yet they are true cases of trachoma. In other cases the disease is intractable, and response is slow to any method of treatment. Locality may have something to do with the severity of the disease. The cases Dr. McMullen sees in the Kentucky mountains are probably more severe than those observed in Louisville.

I believe we are all aware of the fact that the expression operation alone does not cure the disease, and that appropriate after treatment is required to restore the conjunctiva so far as may be possible to its normal condition. If the disease has persisted for a considerable period and extensive cicatricial changes have occurred, no operation will absolutely restore normal conditions,

but by expression and appropriate after treatment we can bring the disease to a close and restore to a certain extent the changes which have occurred in the conjunctiva.

Adolph O. Pfingst: There was a time when I thought the diagnosis of trachoma was easy. My first and largest experience with the disease was during my internship at one of the New York eye clinics where the patients were mainly Russians, Poles, etc., and where eight out of every ten cases seemed to have advanced trachoma. We saw there very few cases of follicular disease. I then thought the diagnosis of trachoma was an easy matter.

Since being in practice here I have seen comparatively few cases of trachoma, but a great many of follicular diseases. Even during the present campaign against trachoma I have seen no more cases than before, that is, if my diagnosis of trachoma based upon clinical manifestations is correct.

Some good is always accomplished by discussions of this kind, but until differential diagnosis between follicular conjunctivitis and trachoma can be made from a bacteriological standpoint I do not believe that a satisfactory conclusion will result from our discussion. Even with a microscopic section before you a differential diagnosis is difficult or impossible in the early stages of trachoma, as the pathological picture is practically the same in the two diseases. About the only distinction pathologists make is that in follicular conjunctivitis the lymph nodes or follicles are separated from the epithelial surface by few lymphoid cells, whereas in trachoma there are a great many cells in the conjunctival stroma. It is this difference in the amount of cellular structure that makes the follicles more pronounced and isolated in follicular disease and less pronounced in trachoma.

In the advanced stages of trachoma, after cicatrization and corneal involvement have supervened, the differential diagnosis is comparatively easy; but in the early stages much confusion exists.

It has always been my belief that an important clinical point of differentiation has been the presence or absence of follicles in the upper cul-de-sac. Whenever there is considerable formation of follicles in the upper cul-de-sac suspicion rests strongly on trachoma. In the majority of the cases recently seen here the follicles were in the lower cul-de-sac. They were in many cases not numerous and were associated with little or no inflammatory reaction. I have yet to see a case in which the follicles appear in rows as they are described in the text books. When the lid is everted a fold of the mucous membrane is made more prominent and the follicles appear on a line. Such cases are not trachoma, but ordinary follicular conjunctivitis.

I believe my views in regard to the treatment of these two conditions are somewhat different

from those of others working in this line, and in discussing the therapy I wish at the outset to enter a protest against the indiscriminate use of the roller forceps or other surgical means in cases such as those observed here recently. I have seen a number of patients who have been operated upon by this method, where there had evidently been follicles in only the lower cul-de-sac, and after the operation considerable fibrous scar tissue was noted in the conjunctiva. I am sure this is an undesirable condition, and for that reason I wish to protest against this method of treatment. In mild cases of follicular conjunctivitis or in what is called trachoma but is in a stage too early to make a diagnosis. I do not believe we ought to treat these cases as trachoma while we are in doubt, but as follicular conjunctivitis. There are in Louisville between 200 and 300 children who have the disease which has been called trachoma, and we are frequently asked what is to be done with these children. What should be our attitude as to the attendance of such cases in school. I think we should treat these cases, not as trachoma but as follicular conjunctivitis, at least until the diagnosis can be definitely determined, by the clinical course. These children ought to be allowed to attend school as they have no active conjunctival inflammation nor purulent secretion, and I do not believe the disease is contagious. If they do not respond to treatment, it is time enough then to talk about more radical measures and exclusion from school.

G. A. Robertson: In 1910 I began work in the eye clinic of the University of Louisville, and since that time have observed many cases of what we called follicular conjunctivitis (we did not diagnose them as trachoma), and all apparently recovered after the use of some simple eye wash. If all these cases of conjunctival inflammation were trachoma, why is it that during these fourteen years since none of these patients have returned with corneal complications and other sequelae? We did not isolate these children nor keep them from school, and as the treatment was so simple, if the disease were trachoma why have not the patients returned with complications, for further treatment? Why do we see each year only one or two cases of real trachoma? Why do we hear so much talk about the dangers of granulated lids in children, and yet when the same children, years afterwards, as adults, are examined for glasses, the conjunctiva is found normal? In my opinion all these cases are simple conjunctivitis and not trachoma.

I have recently seen two or three cases of undoubted trachoma presenting smooth conjunctival scars. The cornea was uninvolved but there was some deformity of the lids. It seems to me if all the cases we have seen during the last fifteen or twenty years represented true trachoma, our dispensaries would now be filled with trachomatous patients. Probably one-half per cent. of our dispensary cases have trachoma.

I believe in employing simple methods of treatment until our diagnosis can be verified.

B. G. Gribble: I appreciate very much the privilege of being present to hear the excellent paper read by Dr. Ray. The number of children with trachoma in the public schools, according to Dr. Moore's diagnosis, was about two per cent., not quite so large an average as Dr. McMullen found in the blue-grass county he mentioned. I would like to ask whether Dr. McMullen considers the diagnosis of trachoma correct in the five patients exhibited here to-night. If they are trachoma, then all the cases so diagnosed in the schools are trachoma; if they are follicular conjunctivitis, then we have been mistaken in our diagnosis (Dr. McMullen replied that while he had always refused to make the diagnosis excepting in daylight, the five cases looked like trachoma to him.)

I believe Dr. Moore was very conservative in his diagnosis. When in the least doubt he specified "suspicious of trachoma" and it was so written on the health card. The object of these cards is to keep an accurate record of the cases examined from time to time. Many of the cases marked "suspicious" have since developed what I consider true trachoma. A few have apparently recovered, but in the majority (at least in 80 per cent of them) the granulations have increased.

Until within the last year I did not make the diagnosis of trachoma until the disease was pronounced. Dr. Moore's object was to teach us to recognize trachoma during the earliest stages when diagnosis and treatment are of the utmost importance. Almost any one can make the diagnosis in the advanced cicatricial stage, but he contended that early diagnosis and prompt treatment were of the greatest value, and he thought it his duty to diagnose the disease as trachoma.

We exclude children having trachoma from school only when they have excessive conjunctival secretions or fail to take treatment. The greatest number of trachoma cases are found in children from institutions. In two orphanages under my jurisdiction there are now about twenty cases of trachoma. I believe Dr. Ray accompanied Dr. Moore on his visit to at least one of the public schools, where ten or twelve cases of trachoma were found. I do not know exactly what their conclusions were, but think Dr. Ray agreed that the disease was trachoma at that time.

As to the "scare" created in the public schools by the diagnosis of trachoma among the children, I do not know which would be the greater crime, to fail to diagnose cases of trachoma, scarlet fever or diphtheria. They are certainly all serious diseases and early diagnosis is required. I believe it is always best to furnish the public with the actual facts, and it seems to me that instead of condemning us for making accurate diagnosis they should assist us all they possibly can.

In examining school children if I find a case that looks suspicious the first question I ask the child is, "have you any brothers or sisters at-

tending this school?" If I get an affirmative answer, the other children are immediately sent for and examined. If a similar condition is found in the other children, the diagnosis of trachoma is confirmed. I do not believe follicular conjunctivitis is a communicable disease like trachoma. I may be wrong in some of these ideas, but they have been gained by six years of school inspection experience and recent observations with Dr. Moore. Even if there is some question about the disease being trachoma, I do not believe it does any harm to make this diagnosis, because the people recognize trachoma as a more serious disease than follicular conjunctivitis, and will be more likely to seek treatment than if you merely say the children have "sore eyes."

Referring to the suggestion just made by Dr. Pfingst that the diagnosis of trachoma makes a bad impression upon the child, and that particularly is this true if the diagnosis is announced before the class. I wish to answer Dr. Pfingst by saying that after making the diagnosis we never announce that it is trachoma, we merely say T. R. or suspected T. R. It is a fact that we write the name trachoma on the slip, but this goes to the individual child. When a child is brought to the office for examination, we usually state to the mother at least, that the patient has trachoma. I do not see any good reason for changing our methods, as there is no disadvantage in the child knowing that the disease is trachoma, and in my opinion there are many advantages, as it may keep other members of the school or family from being infected and will particularly impress upon the child the necessity of immediate treatment.

J. M. Ray, (Closing): I wish to thank the gentleman for their liberal discussion of my paper. My first interest was aroused in regard to the local condition in Louisville when the Public Health Service men came here less than a year ago. Soon after their arrival there appeared several columns in a newspaper to the effect that they had discovered a new contagious eye disease prevalent in the public schools in Louisville. They were teaching the local doctors how to diagnose this new disease. Soon after my telephone bell began to ring and the mothers of school children would report that the government inspector had examined the eyes of her child and had told her she must not return to school as she had contagious eye disease. Other mothers would telephone and ask what I thought about their taking the child out of public school as they did not want them to become infected with this new disease. My duty was simply to pacify them and to assure them that the new disease was one perfectly understood by all the eye doctors in Louisville. They assured me that the public health service men said they had examined a million eyes and this disease was very contagious. While I have not examined a million eyes I have examined a number of eyes many times and this is better

than a million eyes once. I visited one of the schools with the inspector and saw the diagnosis of trachoma made in cases that I had always considered follicular in character. After the inspectors left we became better acquainted with the local condition that had been called trachoma, and we began to scrap among ourselves about the matter. In one institution four or five cases of what had been called trachoma by the inspector were found to disappear under simple treatment. Recently I have had two cases before the clinic which were diagnosed trachoma by the inspectors and they cured up after one operation of simply rubbing the conjunctiva with a piece of gauze and a tooth brush with bichloride of mercury. I recognize the fact that it is often advisable to operate on these patients when the disease is not trachoma because as long as the folliculosis lasts they are more liable to the danger of acute infection either with little Kock Weeks or the Morax Axenfeld variety of infection. As soon as the public schools started up in September a number of cases were seen of acute conjunctivitis engrafted on a folliculosis especially in boys who have been going swimming in the summer. This is especially true of one school in the West End as there is a bathing pond which they are very fond of swimming in. This type of infection was called to my attention a number of years ago when an interne in one of the New York Hospitals.

I certainly cannot think all cases that have been diagnosed as trachoma can be the true disease since the majority of them recover perfectly in a few weeks after one operation leaving perfectly normal conjunctiva and from my standpoint no one operation can possibly cure a case of genuine trachoma as it is the experience of all men who treat this disease that they are subject to frequent relapses.

Apraxia.—Long reviews the history of the conception and the literature of this subject and reports in detail a case in a spinister of 66. There is both lack of proper apprehension of the true nature of things and inability to perform certain acts even when the motion is done before her eyes and she has only to imitate it. She has therefore both the soul-blindness and the motor apraxia. By a series of deductions and eliminations the lesion responsible for the trouble can be localized. Two years ago the patient developed symptoms suggesting foci of hemorrhage in the brain but there was no tendency to hemiplegia or hemianesthesia, hemianopsia or agnosia. Aphasia and apraxia were the only symptoms, and this testified to the comparatively trivial nature of the lesion and located it between the zone of Rolando and the occipital lobe.

FOUR YEARS OF KENTUCKY VITAL STATISTICS.*

By W. L. HEIZER, Bowling Green.

Our exhibit in the basement of this hotel will illustrate better than I can say in words the work we are doing, and I hope you will study this exhibit very carefully. It shows, after all, the full problem consists in securing an all-time health officer. That is the keynote in the presentation of this exhibit. Several things stand out prominently after four years operation of the law. For the first two years twelve and a half per cent. of the certificates of death were returned for information as to the cause of death. I find physicians are careless in stating the proper cause of death. For instance, in deaths from cancer, there would be the simple statement "Cancer." The kind of cancer, the location of it or common contributory causes were left off entirely. In the last twelve months, since paying attention to the completion of certificates, on account of having to send them to the U. S. Government, not over one per cent. had to be returned. When a death occurs from accident or violence, the extent and kind of accident and all the facts relating to it are included in the death certificate. When a death occurs from carcinoma, the site of the disease is named and any operative procedures that may have been undertaken. The statement as to the cause of death is usually very accurate.

Another thing that will interest you is that we have now approximately ninety-seven per cent. of the deaths of the State returned to the office. Fully ninety-five and a half per cent. of the births are returned. We learn this in various ways, from newspaper clippings, interviews with physicians, and personal inspections. We have an inspector who goes about in districts where we are not receiving complete returns and we verify our reports.

One of the reasons why I did not prepare a formal paper is that we publish in the monthly bulletin of the State Board of Health the tables and statistical data which the profession will need. You will find in the last bulletin the final and detailed compilations of statistics of Kentucky by the Federal Government for 1911-12; you will find in the Bulletin of the State Board of Health vital statistics for 1913 for preventable diseases. If any of you are interested in the age, sex, nativity, color and occupation, write the director of the census, the chief of vital statistics, and ask for bulletins number 109 and number 110, and they will contain the tables and vital statistics for the state.

I want to call your attention especially to the exhibit down stairs. It tells the story in about five minutes, so that you can grasp it. It tells three things. In the first place, a red light flashes once every complete turn of the wheel. It shows that one hundred and thirty-six people of Kentucky die every three and three-fourths days from diseases that can and ought to be prevented.

A white light flashes one hundred and thirty-six times every revolution of the wheel, representing that every forty minutes, every day of every year, some Kentuckian loses his life from the carelessness, ignorance or indifference of people in permitting disease seed to grow in their own families or their neighbors.

One hundred and thirty-six graves are planted around the rim of the large wheel, showing that of these tuberculosis kills forty-nine of the number, typhoid fever kills ten, dysentery six, summer complaint of children twelve, diphtheria six, measles three, whooping cough five, scarlet fever, one, etc. A total of 13,463 die each year of preventable diseases. This deadly rate has been in operation for three years, as shown by the official death records in the Bureau of Vital Statistics. It doubtless has been happening for years and will continue so long as you, as a citizen of Kentucky, remain as indifferent and neglectful as you have been in the past.

Tacks of fourteen colors in one hundred and twenty counties of Kentucky show that 13463 people died on an average for three years of diseases which can be prevented. More than ten times this number of people were sick, threatened with death, and the cost of those ill and their families amounted to more than four times what it cost to run the state government. The greater part of this cost, suffering and loss of life, can be stopped.

The purpose of this exhibit is to show the extent of the problem we are confronted with, but this information is useless unless we try to find some means to solve the problem, and I think this exhibit will show conclusively we are powerless to stop this dreadful destruction of life at a terrible cost to the people in money and sorrow unless we have an all-time competent health officer in every county. You are reminded that good health either in the individual or community is purchasable. How? Employ a whole-time health officer to enforce the laws that will give the people pure food, water and air, and to stop the spread of dangerous, communicable diseases when they start. This can be done by looking after the preparation and marketing of milk, meat, and other food stuffs liable to pollution; regulating the disposal of sewage, garbage and other filth, in cities, towns and homes;

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erecting sanitary privies at school houses; examining school children for defective eyesight and hearing, for diseased tonsils and adenoids; examining the water supply before and after a water borne disease appears.

If an all-time health officer is appointed and he does not better the health of the people and save lives, fire him and get one who will.

At the next session of the Legislature we hope we will be successful in carrying our Bill through as we were successful in carrying it almost through even to having votes in the Senate. It would have passed this body were it not for the opposition of two or three men in control of the rules committee at the last moment.

TREATMENT OF THE MIDDLE EAR THROUGH THE EUSTACHIAN TUBE.*

By R. W. BLEDSOE, Covington.

In the treatment of the middle ear through the Eustachian tube, we must take into consideration not only diseases affecting the middle ear and their direct causes, but in addition it is quite as essential to study the indirect or contributory areas, namely the nose and throat, and eliminate such predisposing factors as may be discovered, before they have caused extensive and permanent damage.

Therefore, as a preliminary it might be well to review briefly the anatomical arrangement and physiological function of this region.

While not particularly admired, nor at all desired by the fastidious, the normal nose, externally, is not the small knob of dough stuck in the center of the face, but is a gracefully large organ, with good sized inlets or vestibules, lined with a profuse lattice work of hairs. The nasal chambers are roomy and mucous surfaces nowhere in contact with each other.

Turbinated bodies, thin extending inward and downward from the outer walls, permitting a free circulation of air between the septum and turbinates, and turbinates and outer walls, thereby causing no interference with the drainage canals from the frontal, anterior ethmoidal and maxillary sinuses anteriorly, and the posterior ethmoidal and sphenoidal sinuses posteriorly.

The septum should be in a perpendicular line, free from spurs, ridges, thickenings or deflections, and everywhere covered by ciliated epithelium. In such cases, and in these only can the normal amount of properly fil-

tered, warmed and moistened inspired air be transmitted into the naso-pharynx.

The naso-pharynx begins above at the posterior choanae. Its direction is backward and downward describing an arch or quarter of a circle.

Its mucous surface is smooth, and the inspired air in striking the arch is deflected downward toward the larynx.

On either side and just behind each choanae, and a little above the level of the nasal floor, are the orifices of the Eustachian tubes, surrounded by their cushions which project into the naso-pharyngeal cavity to a variable distance.

The Eustachian tube is nearly one and one half inches long. The pharyngeal end being about one inch lower than the tympanic end, the direction of the tube being upward, backward and outward. It is composed of an osseous or outer, and a cartilaginous or inner portion, each of which are relatively cone-shaped, the smaller ends joining as it were, to form the narrowest part of the tube which is termed the isthmus, and is the commonest seat of stricture. The tube is lined by ciliated epithelium whose current is toward the naso-pharynx.

During the quiescent state the walls are collapsed, but during the act of swallowing the tube is rendered patent, by the contraction of the tensor and levator palati muscles which at the same time elevate and render tense the soft palate, effectually shutting off the naso from the oropharynx, and admitting air through the Eustachian tube to the middle ear.

Any condition or abnormality, altering or interfering with the physiological functions as already stated may be put down as actual predisposing factors, which may later be followed by tubal or tympanic trouble, or both.

It will no doubt suffice to simply mention, without going into detail, some of the conditions to be avoided if possible, or remedied as early as observed, so as to minimize as it were, the number of cases of middle ear involvement in the future.

In the young, we unquestionably are confronted most commonly by the presence of adenoid growth and tonsils. Adenoid, which on account of their mere presence interfere with the deflection of the air current, scattering it instead of directing it in a volume toward the larynx. A constant hyperemia of the entire surrounding area, including Eustachian tube, is kept up by the adenoid and when sufficiently large to press on Eustachian tubes are productive of chronic tubal inflammation, with frequent acute exacerbations.

Diseases tonsils by their attendant irrita-

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bility keep up a chronic catarrhal inflammation of pharynx, naso-pharynx and tube.

Enlarged tonsils act detrimentally, by rendering less effective the action of the palate muscles upon the Eustachian tube, thereby interfering to a greater or less extent with adequate drainage and ventilation of tube and middle ear.

In adults, we more commonly find as predisposing factors the hypertrophied or cystic turbinates, or polyps, growing from diseased turbinated bodies or ethmoidal cells. Chronic ethmoidal and sphenoidal sinusitis exists more frequently than is generally suspected.

Large spurs or thickenings or deflections of the septum make up a considerable proportion of the cases in which the physiological function of the nose is interfered with.

Any or all of the previously mentioned conditions predispose to tubal catarrh, by permitting of a constant hyperaemia of tube attended with negative air pressure and poor drainage and ventilation.

Exciting causes to be mentioned are any acute infectious condition of nose or throat, which may invade the middle ear through the Eustachian tube, such as acute rhinitis, and particularly by that form due to the influenza bacilli.

Scarlet fever seems to have a special fondness for attacking the ears, and is the cause of a very large proportion of middle ear involvements.

Diphtheria, tonsillitis and pharyngitis are not to be overlooked as *ordinary* etiological factors.

Syphilitic cicatrices involving soft palate, naso-pharynx, or even the mouth of Eustachian tube are not infrequently encountered.

Nasal douching has often been the direct cause of tubal or middle ear trouble, but I am sure that if patients follow carefully the details of the present day instructions in regard to handling the douche we need have little fear from this source.

Now to the special point at issue, the treatment of middle ear through the Eustachian tube.

As you well know, there are three methods of inflation, namely, the catheter, the Politzer and the Valsalva.

Each have their distinctive advantage.

Personally my preference is wholly in favor of catheterization, because I consider it by far the most scientific, the most accurate and the only one in which every detail of manipulation is under the immediate and direct control of the operator and can be regulated or adjusted most satisfactorily to the individual case.

Because either nasal chamber is obstructed is no argument against catheterization. If it

be impossible to pass the catheter through the side desired, use one with longer curve and pass it through opposite side.

Even when either or both nasal chambers are encroached upon by enlarged turbinate spurs, etc., the catheter *can* be passed except in the rarest of instances.

The kind of catheter to be used deserves due consideration. I would suggest that only the softest pure silver catheter be employed, so that by its pliability it can readily be so shaped as to pass through any nose. It is much easier on the patient and much more satisfactory to the operator, to make a soft silver catheter fit an abnormal nose than it is to make the nose adjust itself to an unyielding catheter.

The catheter should be tested as to its permeability *each* time just before its use, by passing a current of air through it. This should be a routine practice as a small piece of cotton or other foreign substance may have gotten into it and blown into the Eustachian tube during inflation.

The catheter should be passed with the greatest dexterity so as to not unnecessarily cause pain to the patient nor trauma to inflamed mucosa of nose, naso-pharynx or tube.

When the tip of the catheter is once in position it should be held there immovably, by gentle but firm pressure with thumb and index finger on outer end, while the hand rests firmly on the patients brow and nose, so that under no circumstance can the catheter wobble or become dislocated during the use of the air bag.

Gentleness is appreciated by most of people and when pain and the nervous fear or dread of same can be eliminated it is our solemn duty to do so.

Only a minor class of the idiotic enjoy pain and we will do well to disappoint them.

In a given case of moderate or acute pain in ear of a few hours duration, hearing dulled or muffled, drum slightly retracted, and only moderately or not at all injected, much instantaneous relief can be afforded by very gentle catheterization of the Eustachian tube.

But this must be done under the most strict antiseptic precautions.

If for any reason antiseptic spray or douche is deemed inadvisable, the nose and naso-pharynx may be thoroughly mopped a number of times with cotton tipped applicator and strong solution of argyrol, after mildly coacinating the parts.

Some relief can often be made more lasting by inserting into the catheter a few drops of alboline, to which may be added a very small amount of menthol.

If the tubal or middle ear inflammation is of mild degree, inflation practiced a few times is often sufficient in that it restores the

air pressure within the middle ear, thereby equalizing the circulation and reducing the venous stasis.

If the inflammation is of rather severe grade, however, or infection has already taken place, inflation is likely to be quite painful and great care must be exercised lest more harm than good be done, however, when the middle ear involvement has reached the point where a paracentesis of the drum has been necessary, it is my custom to catheterize the tube at intervals so as to encourage early repair, by ventilation and aiding in removal of exudate.

Unless the most gentle instrumentation be observed, it had best be omitted altogether in this class of cases, as even slight trauma to the tube by indelicate or clumsy manipulation of the catheter, or too violent use of the air pressure, may not only increase the suffering unnecessarily but may also be the means of conducting the infective media into the mastoid antrum, thereby enhancing the probabilities of a mastoiditis in an already vulnerable case.

The air pressure should be very gentle at first and under the direct observation, as it were, by the use of the auscultation tube.

The quantity and force of air passed through catheter will vary with each case and at different times in the same case.

Many of the best men advocate and use compressed air for inflation. Personally I much prefer the Politzer or Dench rubber bag, because the air pressure can be varied from second to second as need be.

I am satisfied that we can lay down no positive rule and say that in such and such a condition or class of cases such and such a number of pounds compressed air pressure can be used.

My contention of this point will be made more clear if you will examine the drums during inflation of a series of cases comprising the acutely inflamed, the chronic, and the thinned atropic varieties.

Following a good free paracentesis, moderately severe air pressure may be used with advantage, as it readily escapes along with some of the exudate through the incision.

I am well aware of the fact that in advocating in a general way, inflation during any acute inflammation, that I subject myself to the possible criticism by some: however, I insist that if the suggestions are followed with due respect for antisepsis and gentleness as previously mentioned, I am confident your patient will feel grateful for the few hours relief from pain you have been able to afford him, also that the healing process will be considerably shortened by aiding nature to stabilize the circulation in these parts.

Not infrequently a middle ear exudate can

be drained through the Eustachian tube during inflation, while the head is bent forward and slightly to the opposite side, rendering Eustachian tube perpendicular and the tympanic end being at the most dependent part of the middle ear cavity.

These suggestions will by no means suffice when the middle ear is acutely inflamed and contains considerable serous or purulent exudate.

Early and free paracentesis is the only method of relief to be considered then.

In some few chronic purulent middle ear cases, the condition is kept up by a stricture of varying degree in Eustachian tube.

These ears can be promptly cured by catheterization and dilatation by the use of bougies, or in addition treated with home made bougies of fine dried catgut, one end of which has been soaked in silver nitrate or copper sulphate solution.

This may be followed by a few drops of weak menthol alboline solution.

Any case of stricture of the Eustachian tube, demonstrated by auscultation, should promptly receive appropriate treatment, as the pathology of stricture here is identical with that of stricture elsewhere and is entitled to just as much definite consideration here, as those existing in any other part of the body.

In many cases of chronic catarrhal deafness with tympanic atrophy, who are benefitted for an hour or two by violent inflation are in reality having the condition made worse by such severe treatment.

By watching the drum during mild inflation, the lower half is seen to bulge considerably, but the patient claims to receive the greatest benefit only when greater air pressure is used and drum bulges or balloons to what appears almost the bursting point.

What significance can we attach to this? It means simply that the drum has been so stretched and thinned that only what I consider violent inflation gives a temporary sense of relief by bringing the intra tympanic tension to a point somewhat near the normal.

In some cases of chronic middle ear thickening with adhesions a few minims of a 1 per cent. sodium bicarb. or potassium iodid solution may be used with advantage.

Poltizer has recommended a few drops of a 2 per cent. pilocarpine solution. More frequently, however, I believe a few drops of a weak menthol alboline solution, or weak iodine alboline solution used in a nebulizer through the Eustachian catheter is followed by considerable improvement.

The frequency with which inflation should be practiced must necessarily vary with not only the variety of the affliction, but also to the class to which the sufferer belongs.

However, I believe we are perfectly justified in saying that those cases which show prompt benefit, even though it be only moderate in degree, following the first few treatments, may be looked upon as hopeful. On the other hand, those which show practically no permanent improvement after two, or at the most three weeks treatment, should be told candidly, but with the utmost discretion and delicacy, that further treatment will be of little or no value to them.

In conclusion I wish to advance the belief that those of us practicing to-day may yet have placed in our hands some means of affording permanent relief to that large number of cases to which we now are compelled to admit our limitations.

DISCUSSION.

Isaac Lederman, Louisville: I want to express my pleasure in having heard Dr. Bledsoe's paper which is very practical, and to my notion correct in every detail. Dr. Bledsoe drew a picture in the beginning of his paper of an ideal nose. There are very few ideal noses in the world, and it is remarkable to see in every day practice many deviations from the normal that are innocent of any mischief. Then again, we are surprised to see the amount of mischief where a slight deviation from the normal exists. Abnormal conditions in the nose vary within great limits as to the amount of trouble they may cause.

With reference to the treatment of disease of the Eustachian tube, I was very glad to hear him state that he believed in the use of the catheter, generally speaking, in preference to the Politzer and the Valsalva methods. The latter method, in the first place, is a dangerous procedure, because it is one that the patient can carry out, and I am sure there have been a great many cases of relaxed drum membrane that have been the source of more trouble than probably the original excuse for the treatment. The Politzer method is very good. I use it in home treatment for cases outside of the office, and in a few cases at the office, and especially in children. In young children it is impossible to use the catheter with any degree of gentleness, which is absolutely essential as Dr. Bledsoe has indicated to you. The Eustachian catheter is the most important instrument we possess in the treatment of ear diseases. There are only a few contraindications to its use, such as the presence of labyrinthian disease, acute inflammation in the naso-pharynx or tubes, and inflammation of the middle ear with or without infection in the acute stage, and the presence of a very relaxed drum membrane, except for temporary relief, are contraindications.

I was glad to hear him mention the importance of early incision of the drum membrane. I think we cannot dwell too strongly on that point. I think there are more cases of chronic ear disease

that are the result of delayed treatment of an acute case than we have any conception of.

I am sure I will not be criticised for making this statement, that every case of acute middle ear disease with infection calls for a paracentesis. There may be very few exceptions, and paracentesis, if done at all should be done early.

With reference to the method of catheterization, we carry out pretty much the same method. At the office I use compressed air and with the modern cutoff we can graduate the pressure quite as well as we can with the Politzer bag.

I also agree with the doctor in regard to the danger of violent inflation. I cannot conceive of any case that calls for violent inflation of the middle ear. We should always be gentle in our manipulation.

Again, I want to commend the paper as being very practical and thorough.

THE SOCIAL AND ECONOMIC ASPECT OF DEAFNESS.*

By I. A. LEDERMAN, Louisville.

"Hearing is that sense by which we distinguish sounds and are capable of enjoying all the agreeable charms of music. By it we are enabled to enjoy the pleasures of society and reciprocally to communicate to each other our thoughts, and intentions, our purposes and desires, while thus our reason is capable of exerting its utmost power and energy. The wise and beneficent Author of Nature intended by the formation of this sense, that we should be social creatures, and receive the greatest and most important part of our knowledge by the information of others. For these purposes we are endowed with hearing, that by a proper exertion of our natural powers, our happiness may be complete."

This quotation is probably familiar to some of you. It is time honored, emanating from a lay mind, and expresses beautifully the thought that is not prone to come to those who are endowed with good hearing. We are not conscious that we possess special senses until we suffer the misfortune of their loss or impairment. Nor do we stop to think of their relative importance to the individual afflicted with complete, or partial loss of them. In the volumes of literature on the subject of ear diseases only a few men have devoted time to the study of the economic and social effect of deafness. In recent years, however, through the work of Makuen and others, including several journals devoted to the advancement of education of the deaf, we are awakening to the importance of this phase of our work.

The influence of deafness from a social and economic standpoint should be studied especi-

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ally with reference to the age of the individual. It is of quite serious importance to consider whether the deafness is congenital, whether its effects are evidenced at an early age or in adult life. A different problem confronts us in the one who has never known what good hearing power means from the one who has in the past enjoyed the possession of this sense. Again, the totally deaf form one class, while the various degrees of partial deafness must receive consideration in proportion to the amount of infirmity involved.

Total deafness in the young child is far-reaching, in that other important senses and in fact the entire personality of the child are invariably affected. That the development of speech depends on the possession of good hearing is unfortunately the most serious one. It is true that instruction begun at an early age, and with proper intelligence can do wonderful work in the training of the deaf child. Lip reading as it is taught in modern institutions and by well directed home training can educate the child to a partial and often quite considerable ability to atone for the absence of the natural hearing power. There is, however, lacking in their speech the modulation and inflection which gives the voice its pleasing and musical quality.

In other respects, also, the deaf child is robbed of his due. The blank, often stupid expression of one thus afflicted is characteristic; it is recognized the moment he is ushered into our presence. We can readily imagine the effect of deafness on the intelligence, temperament and character of the growing child. Shut off from the rest of the world by his inability to understand the happenings around him, he soon becomes morbid and suspicious. He avoids his playmates and as Hays expresses it "sinks into his skin."

The detrimental effects of partial loss of hearing depends upon the degree of deafness. To catch a word here and there, often just sufficient to misunderstand, and obtain mistaken impressions, and to his chagrin to discover his errors of perception or deduction can have no good effect on the nervous equilibrium of the average individual. How much greater must be this deleterious influence on the nervous system of a child in process of development. The very effort to hear and understand when partial deafness exists constitutes a relentless strain on the nervous and physical powers. It is no wonder, then, that the afflicted child finds it impossible to advance equally with the normal child of the same age, intelligence and opportunity. At school, this child will soon become weary and discouraged over the unequal struggle, and unless taken in hand early and assisted through some intelligent means such as individual instruction, will make an absolute fail-

ure of what may have promised to become a useful being. This unfortunate condition must arouse sympathy and our efforts, to remove if possible or else to atone for this terrible handicap must be unremitting.

Let us who possess normal hearing imagine what it would mean to us to be deprived of the pleasure of hearing the noises of the busy street, or the sounds of nature and the living things around us. Music, theatre, the lecture are denied us, with their health giving influence on the mind. The prattle of the infant, the merry laughter of the care-free child, the whispered words of affection, the sage advice of our elders—all are lost and we are alone. Introspection is inevitable; we live within ourselves and it is but natural that morbid and unhealthy thoughts are constantly crowding out the good with which nature may have endowed us. The adult who has once known the blessings of normal hearing, only to be deprived of it by some unfortunate disease is especially to be pitied. He knows what his affliction means, he knows it is robbing him of many blessings he formerly enjoyed. He realizes more and more the futility of his efforts to remain in the social sphere. Then he surrenders and becomes a recluse, shunning society and looking upon himself as a burden to those about him and who labor, but labor in vain to bring happiness again to him.

It is difficult to estimate except in a general way the economic effect of the various degrees of deafness.

In the child it has already been touched upon and may be represented by the influence on his education and the development of his character. Who knows how often it has meant the undoing of one who in the full attainment of his powers might have wielded a world-wide influence. The loss to the community or the world at large through the lack of development of deaf children must always remain an unknown quantity.

Holt (in the *Annals of Otology, Rhinology and Laryngology*) has figured to a nicety the proportion of disability resulting from deafness in the adult. He has reduced to a mathematical formula the actual and relative loss, but this is not necessary here. Let us consider only in a general way this phase of the subject.

The partially deaf individual with only a slight degree of deafness manages to get along in the business world, his affliction amounting to merely an annoyance to himself and not diminishing his economic worth. But what of the higher degrees of deafness, the extreme cases and those completely deaf? They are relegated to occupations purely manual or clerical in character and even they find difficulty in competing with their equals whose hearing is normal. The occupations of

higher order are practically closed to them or at least the field is exceedingly limited. From a purely economical standpoint, therefore, deafness must be considered a very important and distressing calamity. Hays has estimated that about 20 per cent of all ear cases belong to the class of chronic catarrhal otitis media. They are all affected by varying degrees of deafness. The financial loss to the community is expressed by him as follows. "In one year (1911) at two of our dispensaries there were approximately 5000 cases of catarrhal deafness treated. Conservatively we may estimate that this is one-half the number being treated in the city (New York). About one-half the cases are females, but 75 per cent. belong to the wage earning class. Let us say that the average earning capacity is \$10 per week. As the hearing becomes progressively worse, these patients are thrown out of employment, or obtain some less lucrative employment. Let us say their earning capacity is reduced one-half and reckon it on a money basis. Five thousand people lose \$25,000 a week, \$100,000 a month, or over \$1,000,000 a year. Many of these appeal to the public charities, many have to live on the wages of others." While the figures given in the estimate of Hays may be excessive, we can not question the accuracy of his deductions, and they at least open our eyes to a problem that has been accorded scant attention by the rank and file of our specialty and by the general practitioner.

What can we hope to accomplish in the amelioration of this most important condition?

It matters not, so far as its influence on social and economic conditions is concerned, whether the deafness is congenital or acquired. Whether the pathology is resident in the internal or middle ear, and its nature likewise is unimportant.

On the other hand in our efforts to save what we can of the social and economic waste, consequent upon deafness it is all important, to determine, 1st: the primary cause, 2nd, as accurately as possible the prognosis of each individual case, and 3rd, to give such advice, and apply such treatment as our present knowledge dictates.

Congenital deaf-mutism has been shown to occur in families: that it is likely to result from the intermarriages of deaf mutes and from consanguinity of healthy parents has been definitely reeorded. That there occur numerous exceptions to this statement is equally true. Several instances have come to my personal knowledge of deaf-mute children born to parents in good health, and with perfect family histories. Yearsley in a study of 1076 children in three of the schools for the deaf in England found 484 were born deaf,

and 597 had acquired their defect. Besides deafmutism in the direct line or collateral branches of the family and consanguinity of parents, he determined as possible etiologic factors, illegitimacy, insanity and chronic alcoholism. The researches of observers indicate that a certain number of congenitally deaf cases may be due to syphilis. The part that syphilis plays in acquired deafness is well known to us all.

The oft-discussed question of oto-sclerosis has yet to be solved. In spite of the fact that so high an authority as Sir Albert Gray has in a complete and convincing manner given us tables, in which he in numerous instances traces oto-sclerosis from generation to generation, many insist that it is secondary to chronic catarrhal otitis media. The management of these cases constitutes one of the real worries of the otologist. As man is normally endowed with keener hearing power, than is necessary for every day needs, progressive diminution in hearing escapes the notice of most persons so affected, until a considerable degree of deafness has been established. By this time the disease has made inroads in a pathological sense to the extent that return to a normal condition is impossible. Indeed we are fortunate if we succeed in checking the further advancement of the disease.

For the protection of future generations against deaf-mutism and oto-sclerosis, the application of eugenics may furnish a solution.

To quote Yearsley: "It is not possible completely to eradicate congenital deafness, for a certain number of deaf births will happen, like other sporadic cases of defect. I am of the opinion, however, that their number could be materially reduced by the application of eugenic principles. If marriages of the deaf born and of blood relations and the union of alcoholics, syphilitics and those with a family taint of insanity could be prohibited these restrictions alone would be of great assistance. At present we can only try to educate public opinion and this is where our profession should help. The doctor has many grave responsibilities on his shoulders, and not the least of these is his duty to the state. In matters like this he has a great potentiality for good."

Of acquired deafness, the most frequent causes are meningitis, typhoid fever and the exanthemata, particularly measles and scarlet fever. The milder degrees of acquired deafness, can almost invariably be attributed to diseases of the nose and throat. In children, by far the most frequent are adenoids and tonsils. Acute middle ear suppuration, contrary to the belief of the laity, is least often the cause of permanent deafness. Even many cases of chronic middle ear abscess may recover with useful if not perfect hearing. Our

prognosis in the acquired forms, then, is dependent on the early recognition of progressive deafness and prompt removal of its cause.

We are too prone I think to take a hopeless view of all cases of chronic deafness. Where a labyrinthine deafness has been present for sometime we are really helpless. But on the other hand middle ear affections may unexpectedly yield to treatment. I do not consider the diagnosis of oto-sclerosis always easy, nor do I believe we should invariably give a hopeless prognosis when we can definitely determine, an oto-sclerosis in its early stage.

Treatment should be advised and the results carefully noted over a sufficient period of time before we relegate the patient to the great unfortunate class of incurables. The prognosis in many cases depends on the effects of treatment. If only the disease can be held in obedience, or its progress rendered slower we are rendering a distinct service.

In children, the advent of deafness constitutes an urgent appeal for attention to the naso-pharynx and pharynx. The removal of adenoids and in most cases the tonsils is imperative. In adults the nasal fossae as well as the naso-pharynx demand primary inspection and the correction of any deviation from the normal,

It is our duty to impress on the public, each in our sphere of influence, the importance of ear symptoms. The significance of ear ache is better appreciated than formerly and our efforts should be directed to further impress those, whom we can, with the importance of nipping in the bud any incipient ear disease, be it catarrhal or purulent.

Yearsley again says, "The prevention of acquired deafmutism embraces a number of factors. It means for one thing better care of children generally, better hygiene, better feeding, better clothing, better surroundings. It means the resolute fighting of many superstitions such as the danger of "stopping a discharge," and the policy embodied in "growing out of" a disease when more frequently it is the disease that out-grows the child. It means better care of the ears during the exanthemata. Until the infectious fevers are shorn of their potency by preventive medicine, there must be ceaseless watch kept for the aural complications by the attendant physician. The practitioner must be educated to watch for deafness or ear pain and to interfere promptly himself or urge the necessity of immediate expert advice. He must also know how to deal with the nose and throat complications, which lead to this development."

There are certain occupations which are known to predispose, or actually bring about deafness. Bryant has enumerated no less

than sixty (60) trades, at whose door may be laid the blame for many cases of impaired hearing. Any occupation that demands working constantly in a loud noise, such as boiler makers, cooper, riveters, machinists, engineers and many others, cause deafness at an early age. It is a characteristic form of defect, and has been known as boilermaker's deafness.

Another class of occupational disease of the ear is due to rapid and constant variations in barometric pressure, variations of temperature, and humidity. An example of this class is found in caisson workers.

The inhalation of dust and of poisonous gases, by irritation of the naso-pharyngeal mucous membrane, may secondarily be the cause of chronic middle ear disease. In many instances more than one of these factors play a part. The victims of these occupations are sufficient in number to claim consideration, when we are dealing with the economic side of deafness. By training they may be efficient in their individual trade, but are unfitted for any other occupation. So they must submit to the inevitable and remain in their narrow sphere of usefulness. Their deafness is incurable. In the general uplift movement of the present times, do we not owe them some effort at improving the industrial conditions under which they must earn a livelihood? Suggestions have been made that resort be had to legislation to enforce the necessary reforms in these industries. These suggestions have not received encouragement, and they really seem too drastic.

Is it not possible that in time employers might be induced for humanitarian as well as economic reasons to contrive some means of lessening the dangers incident to their particular trades?

In a number of cases of middle ear deafness, there remains a remnant of hearing power but not sufficient for practical purposes. Many of these can be benefitted by mechanical appliances which have been devised as aids to defective hearing.

That there is value in a few of these devices applied in suitable cases is without doubt. There is also no question that their use in some cases is harmful. This has proven a fertile field for unprincipled tradesmen who by extensive advertising have found a ready response from a gullible public. Therefore, no one should resort to the use of these aids except at the advice of a physician who is familiar with the condition of the ear, and the principle involved in the various appliances.

One of the various forms of artificial ear drums, may be useful where the membrana tympani is partially or wholly defective. Tympanic ballast replaces the ossicles when they have been destroyed by suppuration. It requires judgment to determine the indications

and contra-indications, the safety or danger of these measures. It cannot and should not be left to the patient.

In catarrhal cases with the drum membrane intact, instruments designed to gather and amplify the sound waves may really perform a good service. The ear trumpet and the fan are examples and have been used for decades. In recent years electrical devices, such as the electrophone have found a ready market.

But these appliances are at best unsightly while the selling price of some places them beyond the reach of the poor. Their bulk and mechanical imperfection are a marked disadvantage and their sphere of usefulness is limited. The natural reluctance of most persons to appear in public with an instrument applied to the ear, which attracts attention, is a serious drawback to their more universal use.

Again, how many employers are willing to overlook this manifest evidence of an infirmity?

In the past decade the education of the incurably deaf child has evoked the earnest efforts of competent and enthusiastic workers, to the end that its present status can truly be said to constitute one of the most important triumphs of modern thought. The history of its evolution from a modest beginning more than a century ago is a very interesting chapter, the recital of which would unduly lengthen this paper.

To our credit be it said that according to Kerr Love of Glasgow the situation in this country is most competently handled. Some of our large cities have splendid institutions and private schools devoted to this purpose. Many publications, notably the valuable contributions of Makuen and others, both professional and lay workers, have given us knowledge of what is being accomplished. The De l'Epee system of sign language has been practically relegated to the past, except in special instances as an adjunct to the accomplishment of lip reading.

Home training by an intelligent and patient mother under the supervision of an expert or the employment of a private instructor is usually successful. The character of attention suitable to each child depends upon its mental attainments. Those possessing normal mental power very readily are taught the art of lip reading. Those of inferior aptitude for training are taught the combination of lip reading, and sign language. It is claimed by teachers engaged in this most valuable branch of education that the child of superior mind is very quickly and readily made proficient. The average child requires a little more time and patience, but the end is certainly accomplished. Only the mentally defective have difficulty in mastering the oral method and this class require a long period of institu-

tional training. Many of these institutions aim to teach more than the ability to hear and speak. They, in addition prepare the student for some practical work in life by giving very thorough courses in manual training. In this manner they go far in solving the economical problem. The most unfortunate of all are those who in addition to deafness are afflicted with blindness, partial or complete. But even the lot of these, hopeless as it may seem, is rendered bearable, by the development of the tactile sense. It is considered most essential that the child possessing even moderate attainments should be taught at home and should attend public school in specially arranged classes according to the degree of deafness and mental capacity. They should associate with those possessing good hearing rather than with their kind.

Someone has said that the time to cure deafness is before it begins. Certainly the time to begin the education of the deaf child is as soon as the defect is discovered. As Kerr Love states, the untaught deaf child of seven begins his school education with no more intellectual development than the child of two. The most important period of a child's life is before the school age. It is during this time that speech is acquired and if his education for the development of speech is postponed, it will be increasingly difficult in direct proportion to his age.

Above all we must realize that intellectual development of the deaf child is not the only, though it may be the prime consideration. He is not merely an animal because he is deaf and dumb. He has capacity for moral, and social culture. He possesses emotions and is amenable to psychic influences just as well as the normal child. To shun him or to ignore him is a serious mistake. He is on the contrary entitled to special personal attention. He is to be taken to our bosom, made to feel that he is one of us, and that our world is his world. Only in this manner can we make of him a useful citizen and a valued friend.

In conclusion: We are well aware of the many burdens the modern propaganda for the welfare of the public have placed upon the shoulders of the general practitioner. We, specialists, have no desire to add to them. Yet, we may write and preach to our heart's content, but who will carry our message to the homes of the people? It is the family doctor who is awaited with mingled feelings of fear and hope in times of trouble and it is he to whom the anxious mother comes for advice, when the welfare of her children is concerned. He can teach her that half the deafness in the world can be prevented, by a proper recognition of the etiology and prompt attention to the initial symptoms of ear disease. And if deafness has become an established

and incurable fact, he can inform her where-in she may take hope and direct her into the path where she may obtain for her child that which his due him.

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DISCUSSION.

J. A. Stucky, Lexington: I think there is very little to add to the practical paper that Dr. Lederman has read to us. I do not think this paper is intended so much for the otologist and specialist as it is for the general practitioner, and I want to emphasize the last clause in the paper that "it is up to the general practitioner," for after all he is the man behind the gun. He is the most important man to-day in the field of medicine. He is the man that is closest to the mother and the child, closest to the home, and one of the danger signals in the child is when that child begins to listen with its eyes, so to speak, and I mean by that watching the lip movement, he begins to cease to try to hear, and that results naturally in an under development or arrested development of the hearing center. I believe the special centers, like the tactile center of the blind, can be developed by use. The blind man sees by his fingers, his sense of touch. His sense of touch is much more accurate than yours or mine, and it becomes so by development of that sense of touch. In these cases of ankylosis of the ossicles, I believe they cannot hear in a room in which speaking is going on, they cease to listen because they lose a great deal, and I agree with the essayist that many of these cases can be arrested and many of them improved. I venture to say and I believe, as I advanced at the New York Academy of Medicine two years ago, that oto-sclerosis can be arrested in many cases, and it can be arrested by two people, the physiological chemist and the dietician. We become deaf from a local cause or causes, such as diseases of the naso-pharynx, or we become deaf from constitutional or systemic causes, and the cause of the condition is either from within or from without the body, and the unsolved problems in the metabolism are to be solved with the aid of the physiological chemist and the dietician. That is a point I want to emphasize.

I have now five cases to add to those that I referred to two years ago in a paper read at the New York Academy of Medicine. I would call the special attention of the general practitioner to the paper that Dr. Lederman referred to, where the author emphasized and tabulated the economic value of the deaf and his conclusions

are now being used by insurance companies generally. I believe that eugenists will help us a great deal. I think the pendulum is swinging from one extreme to the other and is about to settle. We are not the extremists about eugenics that we were a few years ago, but the medical profession must take an active and decided stand. To those of you general practitioners who have to treat these cases at home of beginning deafness, I want to mention one thing Dr. Lederman referred to but did not emphasize, and that is there is danger in overtreatment locally. I have seen many a case of patent Eustachian tube and relaxed tympanic membrane the result of too frequent and too forcible use of the Politzer bag.

As to hearing devices, it is so easy for the general practitioner to say to a patient, "get you a little horn; get you one of these electric hearing apparatus." I believe there is danger in resorting to these too early. Our patients should be taught to listen. If a child is deaf from organic disease of the auditory nerve, or the child is born deaf, for the sake of the child and its future let some one teach it early, how to talk and read lip movement.

John Wesley Murphy, Cincinnati: I enjoyed Dr. Lederman's paper very much, and those of us who are connected with institutional work realize the importance of this more than others, as we have to come in contact with so frequently these unfortunates who are not able to make a living and are really dependents upon the community, and the amount of economic loss resulting from this disease is greater than any of us realize except when it is brought home to us in such statistics as Dr. Lederman has brought to us this afternoon.

I am satisfied that too frequently the average physician is prone to give an unfavorable prognosis in many cases of beginning deafness or early deafness in children and say "well, the child will outgrow it. Let it alone and we think it will get better." Such advice works great harm. As the essayist has well said, the time to begin treatment of these cases is in the early recognition of the trouble, and that can only be ascertained by careful investigation of each case to find the cause and remove it, and the effect will disappear. The capability of many of these children to pick up even when there is a permanent injury to the hearing, by early education and treatment of the child, can be made to wonderfully improve.

I had the pleasure two years ago of sitting within a few feet of that most remarkable of all cases of deafness and blindness, Helen Keller, and hearing her give the experiences of her life, which were most wonderful. She sat there and listened to the addresses the same as any one here with her teacher sitting by her side, and with her hand in hers, by means of touching her fingers she could follow the papers and remarks, and you would see her laugh when any jokes were

told the same as any one else. What education can do for these cases is most remarkable. Professor Neumann, of Vienna, was with me, and after the address (Neumann, who is the celebrated ear man of Vienna,) said, "I would like to meet Miss Keller." So I took him up and introduced him, and simply by putting his finger on her lips she was able to carry on a conversation with him both in German as well as in English and seemed to get every word he said. That, of course, is unusual.

Of the artificial devices that are used, many of them are abused. Not long ago I had a patient come to the office with a purulent free discharge from both ears. The patient was a woman, thirty-five years of age, and in washing them out I extracted a couple of artificial drums. They were placed there some months before. These cases must be seen early, and I think many of them that we are apt to consider hopeless can be benefited very materially by early recognition and proper treatment such as the essayist has so clearly brought before us.

W. B. McClure, Lexington: It has been said that falsehoods, in the order of their enormity, may be classified as lies, d—n lies, and statistics, and this is peculiarly true as regards deafness.

There is a picturesqueness about the available statistics that suggests that they should be taken with a large pinch of salt. You may have heard of the census enumerator in an Irish district who returned such a staggering number of cases of dumbness that an investigation followed and it was discovered that he had listed all the babies as dumb, since they could not talk.

Records at the Kentucky School at Danville show that the principal causes of adventitious deafness in this state are as given in the paper under discussion. It is also shown that consanguinity of parents is a fruitful cause of congenital deafness.

Dr. Edward Allan Fay, of Washington, in an exhaustive work on the marriages of the deaf in which over 4500 such unions are recorded, shows that in marriages between congenitally deaf persons there is a marked tendency to produce deaf offspring. This tendency is lessened where one partner is adventitiously deaf, and practically disappears where both partners are adventitiously deaf, or one is a hearing person.

I have never yet found any statistics that could afford any definite clue to the pre-natal causes of deafness. It is as apt to appear in the palace of the king as in the hovel of the peasant; in the home of the churchman of puritan ancestry as in that of the roue. It is a cruel wrong to approach their cases in the spirit of the Pharisee, who questioned "Master, who did sin, this man or his parents, that he was born blind."

I count a number of intelligent, educated deaf people among my friends, and from what I have seen and heard of the deaf as a class I certainly would not include them among the eugenically

unfit. I know of many happy marriages among them, and am informed from trustworthy sources that, as a rule, the offspring are sound and make intelligent and useful members of the body politic. Only a short time ago one of the historic colleges of the State conferred the degree of L. L. D. up on the son of a deaf couple, graduate of the Danville School, and a little later two other students, offspring of deaf parents, delivered the valedictories for their classes at other colleges. As for Brown, the grandson of another graduate of the Kentucky School at Danville, led the Mid-dies on Franklin Field—their contest with the Army football squad last fall.

As the speaker has pointed out, deafness usually cuts off those thus afflicted from the better paid occupations and also tends to increase the difficulty of securing employment. Employers, as a rule, know but little of the deaf and are doubtful of their ability. The new Employers' Liability Law has increased this difficulty. I personally know of a number of cases where deaf men who were rendering efficient and satisfactory services, have been dismissed by blanket orders from headquarters that all employees with defective hearing should be dropped. An efficient system of informal training at the various state schools, however, has proved so efficacious that the per cent. of the deaf who are self-supporting is but little less than the hearing. Success has been achieved in many fields, in some of which it would appear that deafness is an insurmountable bar. There is a deaf patent lawyer in Chicago, whose income is said to reach many thousands per year; a chemist and metallurgist in the same city stands at the head of his profession. North Carolina had for years a deaf State botanist. Douglas Tilden, the sculptor, has had his work win the coveted "honorable" in the Paris salon, and has been instructor in Hopkins Art Institute, San Francisco. Humphrey Moore's Spanish and Oriental paintings have delighted thousands, there are college professors, doctors, dentists, ministers among the deaf, showing that the opportunity for service in high places is not altogether closed to them.

My experience has been that the commonly received opinions that the deaf are morose and suspicious is far from the truth. If they wear that aspect at all it is as a mask for the purpose of discouraging idle curiosity. Their affliction develops in them a philanthropy and humor that enables them to endure with resignation the inconveniences and deprivations that it imposes. Those who were deaf at birth suffer less though their deprivation is the greater; for having never heard the sweet concord of sound they cannot be said to have lost what they never possessed. It is those who became deaf after they had come to depend on the ear for a large share of the enjoyment who deserve our pity most, for it is of such that the words, "A sorrow's crown of sor-

row lies in remembering happier things," applies with full force.

I am afraid I am not as fully convinced of the possibilities of giving speech to the congenitally deaf child, as my friend the author of the paper under discussion. As I view it, it is entirely possible to give some degree of speech to practically every deaf child of normal intelligence, but a useful degree of speech to be acquired with a reasonable expenditure of time and effort is another thing. The voice of the congenitally deaf child taught to speak will ever be frightfully monotonous and sepulchral, usually understood with difficulty even by members of the family and not at all by strangers. Much stress is laid by oral teachers upon the "restoration to society" effected by this method, but in practice it does not work out satisfactorily. The barrier of deafness is not easily done away with. Dr. John Kitto, the great Bible scholar, in his work, "The Lost Senses" confessed his inability to mingle with the hearing socially on equal terms. He gave as the reason, "Thought one spake with the tongue of angels the fact of deafness, in itself, would cut him off socially from his fellows." The congenitally deaf who have learned at the expense of infinite labor and precious time to speak, are not usually enthusiastic over the results achieved. Indeed, a curious situation exists in this respect. The educated members of this class are arrayed almost solidly against this pure oral method. Not a gathering takes place in this country, but what resolutions are passed condemning its exclusive use, and endorsing the combined system which is a union of the Del' Epie and oral methods. The deaf claim that success under a pure oral method is possible only with the brightest ones; that the less quick of eye, as well as those of slower mentality, who under the Del' Epie system made normal progress, have little chance under the oral method.

The National Association of the Deaf at its meeting in Cleveland, Ohio, a year ago, strongly condemned single method schools and endorsed the combined system. So did the International Convention of the Deaf at Paris, France, in 1912. The Kentucky Association of the Deaf at its last meeting in Danville went on record to the same effect.

The following resolutions adopted by the Nebraska Association of the Deaf at Omaha, August 22nd, are typical of similar resolutions at every important gathering of the deaf the country over.

While the oral side is to-day the popular one largely because of the active work of a richly endowed Association headed by Dr. A. Graham Bell, nearly all the large schools for the deaf in the country use the Combined System. An increasing use is being made of the oral method in practically all the schools, but in many cases it is against the better judgment of the principals. Parental pressure forces its use for in many in-

stances parents insist on attempting to live the lives of their children for them and demand that they be continued in speech classes, even when assured that the attempt to educate by that method has failed.

The deaf are not opposed to the oral method *per se* and advocate a fair trial of it for each child on entering school. Their position is summed up in the following set of resolutions adopted by the Nebraska State Association of the Deaf at a meeting held in Omaha last month. These resolutions are typical of those adopted by other associations, state, national and international, for all over the world the educated deaf are hammering the exclusive use of one method.

Resolved, That while we fully recognize and appreciate the value of speech to the deaf, we also recognize the difficulty, and even the impossibility, of acquiring it by many of the deaf; and be it further

Resolved, That we favor the best oral instruction for those who can profit by it; and, be it further

Resolved, That where the attempt to acquire speech results in the sacrifice of mental development, we favor the employment of such methods as will secure the highest and broadest mental development and spiritual uplift; and, be it further

Resolved, That the Combined System, as years of experience have proven, is the only method that can accomplish all this; that it is the method best adapted to bring out and develop the latent possibilities of the deaf child; that it is the method which fits the child, not one to which the child is fitted; therefore we, the deaf citizens of the State of Nebraska, as have the deaf of every State in the Union and every country in the world, do unqualifiedly and without exception endorse the Combined System as a superior method for the instruction and education of the deaf child.

I. A. Lederman, (Closing): I am very glad to have heard the remarks of both Dr. Stucky and Dr. Murphy, because I realize the scope of my paper was such as to make it impossible for me to go into the details of diagnosis and treatment, and they have supplied some practical points which I could not embody in my paper.

I have nothing further to add except to thank you and them for the discussion.

Reflex Contracture of the Fingers from Distant Traumatic Joint Disease.—Tietze gives a number of illustrations of the contracture he describes, saying that as it is impossible to bend the fingers intentionally in this way, the bending must be a reflex process from the joint trouble. He explains it as the result of efforts to spare the painful joint, as he has witnessed these contractures develop during acute articular rheumatism and during an attack of gout as well as with chronic arthritis and joint disease from severe trauma.

THE PREPARATION AND USE OF AUTOGENOUS VACCINES.*

By JOHN D. ALLEN, Louisville.

Medical progress is due to specific diagnosis and specific treatment. No diagnosis is more specific than the isolation of the bacteria in a given infection, and no treatment more specific than the use of an autogenous vaccine prepared from the isolated bacteria.

Infections are taken care of by the generation on the part of the body cells of specific digestive enzymes or ferment, which ferments in return prepared the bacteria for cell digestion. It has been demonstrated that bacteria are composed of two main groups of substances, one a non-specific, stable proteid substance, common to all bacteria; the other, a specific unstable substance found the same in no two different bacteria. It has also been demonstrated that a digestion on the part of the body cells, of dead bacteria stimulates a production of these ferments, and that the direct stimulation of the ferments is due to that part of the bacteria which is specific and unstable, and that this specific substance in the altered or unstable form will not excite a production of the ferments necessary to care for the infection. Hence the negative results sometimes obtained in vaccine therapy.

Auto therapy was in use before bacteria were ever isolated, in fact it is nature's method of caring for an infection, for dead bacteria and their toxins are constantly being carried from the infected foci to the healthy tissues, where they are digested and specific ferments generated; which ferments being returned to the infected foci, prepare the living bacteria for cell digestion. The old methods of "scattering a boil," the routine exercise given tubercular patients are nothing more than the practice of auto therapy, for by stimulating the infected area, the blood and lymph supply to the infected focus is increased, and dead bacteria and their toxins are carried at a more rapid rate to the healthy tissues, where they are digested and specific ferments generated. We have improved on these methods by injecting a saline suspension of the specific dead bacteria, directly into the healthy tissues which causes a more rapid production of these specific ferments. This saline suspension of the specific dead bacteria which were previously cultured from the infected focus is called an autogenous vaccine. Then since all infections which are taken care of, are taken care of by the digestion of dead bacteria, administered either on the part of nature, or the physician, or both, the logical conclusion would be that all infections can be

treated by the administration of autogenous vaccines. As a matter of fact, however, some infections are so toxic, such as diphtheria and tetanus, that antitoxins have to be administered for the system is unable to prepare a sufficient amount of anti-toxins.

Successful vaccine therapy depends upon, first, a specific diagnosis, second, the preparation of the vaccine, and third, the administration or use of the vaccine.

SPECIFIC DIAGNOSIS.

Since the results of autogenous vaccines are dependent upon the specificity of the bacteria used, it is essential that the vaccine should be prepared from the specific bacteria causing the infection, for all exposed infected foci contain bacteria which are not responsible for the infection, on the other hand such foci not infrequently contain secondary bacteria which play some part in the infection and should be incorporated in the vaccine.

In order to isolate the specific bacteria certain routine precautions are necessary in each case. The first is to make a direct examination of the infected material at hand, using precautions to avoid contamination in collecting and handling the specimen, and avoiding the use of any antiseptics which would come in contact with the bacteria you wish to culture. Urine should always be drawn with a sterile catheter into a sterile container, after the external urinary meatus has been thoroughly cleansed. Feces should be collected without urinary contamination. The mouth should be cleansed as thoroughly as possible before collecting sputum and the same precautions should be used before collecting secretions from infected tonsils and pyorrheic pockets. The two latter are best collected by means of a small capillary pipette. Pus from abscess cavities may be collected by the same method, after the surface has been painted with tincture of iodine. The prime object being to collect the specimen direct from the infected focus. Should the specimen be kept on hand any length of time before culturing, several volumes of sterile water should be added to prevent its drying.

Blood specimens are best collected by means of a 25 c.c. all glass syringe and large needle which have been previously boiled. After the arm has been bandaged above the elbow a suitable vein at the bend of the elbow is selected and painted with iodine, the needle is introduced and about 20 c.c. of blood withdrawn. A drop is placed on a clean slide for direct examination, 10 c.c. of the blood is then introduced into a flask containing 50 c.c. of peptone broth, containing five per cent. sodium chloride; 5 c.c. is introduced into a second flask containing broth and 2 per cent.

*Read before the Kentucky State Medical Association, Newport, September 22-25, 1914.

dextrose. The remaining blood is placed in a sterile tube and allowed to clot, the serum withdrawn and the clot incubated, as streptococci grow very readily on the clot.

After the specimen has been collected with due precautions a direct examination is necessary before the specimen is cultured, in order to obtain some idea as to the media necessary. Both a methylene blue and Grams stain should be done. In case of pus, feces and sputum several slides should be stained; urine should be centrifuged and the sediment stained. The media best suited for the bacteria in question is now selected. Unless the proper media is used it will be difficult to isolate the offending bacteria, and should the bacteria be isolated the vaccine prepared from it will be worthless, for bacteria are so sensitive to their environment that it is very easy to attenuate the specific part of a virulent strain by several transfers on unsuitable media. The media is used it will be difficult to isolate the the shortest length of time is the one to be desired for it alters the bacteria least, preserving the specific part of the bacteria.

Practically 95 per cent of all cultures for vaccines are grown on plain, blood, hydrocele, or ascitic agar. The plain agar should be so adjusted that it takes 1 c.c. of a 1 per cent. normal Na-Oh to neutralize 10 c.c. of the agar. Blood agar is prepared by adding 1 c.c. of sterile blood to 7 c.c. of agar which has been melted and cooled to 50 degrees C. Hydrocele and ascitic agar are prepared by adding 1 part of fluid to 2 parts of agar. Since practically all pathogenic bacteria will grow on blood agar, and not on plain agar, it is well to always use the blood agar in conjunction with the other media and when the gonococcus is suspected hydrocele agar should be used.

After the proper media has been selected the specimen is plated and incubated for 24 hours. After this time the plate should be examined and if only one bacteria is present the vaccine can be prepared from the plate. However the plate should not be destroyed but incubated for another 24 hours, for certain bacteria require a longer period of incubation. In case there is more than one bacteria the different colonies are transferred to slant tubes and again incubated, from these after 24 to 36 hours the vaccines should be prepared, after the bacteria have been identified by their cultural and staining characteristics. Cultures older than these show a certain amount of autolysis, which destroys the specific part of the bacteria rendering it unfit for vaccines.

To the slant tubes normal saline is added and the bacteria rubbed down with the aid of a platinum loop. This heavy emulsion is then poured into a sterile bottle or test tube

containing glass beads and thoroughly shaken until all clumps are dissolved. If any of the culture media is contained in the emulsion it should be centrifuged for a few minutes. After this the supernatant fluid is transferred by means of a pipette to a sterile tube and is ready for standardization.

The standardization, which is the determination of the number of bacteria in 1 c.c. of the emulsion can be done by several different methods. I usually use Wright's method, which consists in drawing equal parts of the emulsion and normal fresh blood into a capillary pipette, mixing thoroughly, and making thin smears on several slides. These slides are stained with Wright's blood stain, and the number of red cells and bacteria in several oil emulsion fields counted, from this the number of bacteria to a c.m., is determined and the number to a c.c. estimated. I now dilute the emulsion so that it contains 1,000,000 bacteria to a c.c. and to this add .5 per cent carbolie acid or .2 per cent trikresol.

The emulsion is now sterilized by placing it on a water bath, which contains a lid, so that all parts of the container will be exposed to the heat, at 56 degrees C. for one hour. A temperature higher than 56 materially affects the specific part of the bacteria and should be used only when this temperature fails to produce sterility. Culture media is now inoculated with some of the emulsion and incubated for 24 hours to insure sterility.

The vaccine is now diluted to the proper dosage and placed in 1 c.c. ampules and kept on ice until ready for use. In case there is more than one bacteria the emulsions should be prepared separately and mixed when the vaccine is dosed out, the number depending upon the type of bacteria.

A vaccine thus prepared, is an efficient one, containing the specific bacteria, prepared from fresh virulent cultures, and the specific part of the bacteria in a stable form, and should produce results when properly used. It should also serve to bring the physician into closer contact with his patient and establish a certain amount of assurance, for he realizes that he is not treating empirically but using an efficient specific remedy.

USE OF VACCINE.

Not only do the results obtained from the use of an autogenous vaccine depend upon its preparedness, but also upon its use, for the indiscriminate use of vaccine is detrimental to the patient. The questions to be answered in regard to its use are—how much to use, when, how and where to use it, and on what type of cases.

Theoretically, the opsonic index is a valuable guide in determining the size and frequency of the dose, but its technique is rather

complicated and renders it impracticable for everyday use. However in those cases, where we fail to obtain results it is always wise to determine the patient's index, and thus regulate scientifically the size and frequency of the dose. In practice this can be determined, by the clinical symptoms, such as a rising temperature, increased pulse rate, the amount of local and systemic reaction and the patient's general condition. My general rule is to begin with a small dose and progressively increase, since immunity is more effectively produced by the repeated injection of gradually increasing doses, rather than by a single large dose. When there is no improvement I increase the dose or shorten the interval or both. A marked local reaction accompanied by malaise and an aggravation of symptoms is an indication that the dose has been too large. In acute infections, a dose should be given every third day, or better whenever the temperature begins to rise, in chronic conditions every fifth to seventh day. The vaccine should be given subcutaneously in the loose tissues, preferably under the scapular, as here the patient is less inconvenienced by the local reaction.

TYPE OF CASES.

The best results from the use of vaccines are obtained in chronic localized infections, however, some good results are obtained in acute infections. Since I am engaged in the preparation of vaccines on the orders of other physicians, I have had an opportunity to prepare vaccines for all types of cases that came into the care of both specialists and general practitioners, and have also had an opportunity to observe the results by subsequent examinations and reports from the doctors in charge of the cases.

First, beginning with the lesions of the skin, I have prepared vaccines for acne, furunculosis, Carbunculosis, infections of lymphatic glands, and chronic eczematous conditions; second, diseases of the respiratory tract, as chronic rhinitis, bronchitis, tonsillitis, empyema and tuberculosis with mixed infection; third, surgical wounds, infections of rectum and anus; fourth, diseases of genito-urinary tract as pyelitis, cystitis, prostatitis, urethritis and endo metritis.

In 20 cases of acne the staphylococcus albus was demonstrated in every case. All the cases except three showed decided improvement, and in seven cases all the lesions disappeared after an injection of from 4 to 6 doses. The three cases evidently due to the acne bacillus showed no improvement after six doses. This type of cases have shown the most unsatisfactory results.

In 18 cases of furunculosis and carbunculosis, the staphylococcus aureus was demon-

strated in every case. All the cases except one, which was a diabetic, made complete and rapid recovery and have had no return. Several of these cases were previously treated with stock vaccines without results. Two cases of chronic eczema showed improvement.

In glandular infections the results have been good in all except those which were tubercular and these showed some improvement on vaccines prepared from the secondary bacteria.

In 5 cases of chronic rhinitis and tonsillitis the streptococcus, pneumococcus, and staphylococcus aureus were isolated. All these cases showed decided improvement. One of the cases had had violent attacks of tonsillitis every fall and winter, since the use of the vaccine he has not had a recurrence for a period of two years.

Most satisfactory results have been obtained in 22 cases of chronic bronchitis. In these cases the bacillus pyocyaneus, pneumococcus, micrococcus, and staphylococcus aureus were isolated. One a very interesting case. Man, age 56, had had a bronchiectasis for a number of years, had spent the winter in Florida each year with some improvement but had a recurrence whenever he returned home. At the time the vaccine was prepared as he expressed it, was spitting up a quart a day, having toxic headaches, loss of appetite, etc. After six doses of vaccine, prepared from the sputum, his cough, headache, and general symptoms entirely disappeared. In order to control his condition, however, a fresh vaccine should be given at intervals.

Out of 25 cases of tuberculosis, treated with a mixed autogenous vaccine, all except five showed decided improvement. Four are entirely well in so far as clinical symptoms are concerned. Those that showed no improvement were very advanced cases.

I have prepared vaccines for six cases of puerperal septicemia. Four of the cases in which the streptococcus was isolated, died. Two of the cases in which the staphylococcus aureus was isolated made good recoveries. Out of five cases puritis ani in which the staphylococcus albus and colon bacillus were isolated, two recovered nicely, two showed improvement, one showed no improvement.

The field in which the most satisfactory results are obtained, is the genito urinary tract. Out of 48 cases, of acute and chronic pyelitis and cystitis, 41 made complete recoveries. Thirty-five of these infections were due to the colon bacillus, two to the bacillus pyocyaneus. The others were mixed infections, due to the colon bacillus and staphylococcus aureus and in addition two of the cases of cystitis showed the gonococcus. Those cases which showed no improvement later proved to be mechanical

conditions with secondary infections. Seventy-five cases of chronic gonorrhoea which showed in addition to the gonococcus, the staphylococcus albus and a diphtheroid bacillus, showed improvement and the majority made a complete recovery. Fifteen cases which had had gonorrhea, but showed only the staphylococcus albus and a diphtheroid bacillus recovered nicely. The improvement in this type of cases is usually slow. A very interesting case, Mr. A., was referred to me for a blood examination with instruction to look especially for malarial parasites. He gave the following history: Age, 43. was having what he termed, dumb chills, headaches, nervous, aching in his joints and muscles, generally indisposed, with slight temperature at times. These symptoms had continued intermittently, for a period of over two years, and he had been treated by several different physicians for malaria. The blood examination showed no parasites, but a leucocytosis of 13,500. Further examination revealed an infected prostate from which a streptococcus was isolated. A vaccine was prepared, and after six doses, all of his symptoms disappeared.

The most spectacular results which I have seen from the use of autogenous vaccines have been in tuberculosis of the genito urinary tract, with mixed infections. The bacteria isolated were the colon bacillus, streptococcus and bacillus pyocyaneus. Out of seven cases treated, six showed a tubercular infection of both kidneys, bladder and testicles. One showed infection of kidneys only. The improvement in all was immediate. The frequency of micturition and tenesmus which is so pronounced in the bladder infections was decidedly improved after the first dose of vaccine. Two of the cases had tubercular sinuses, resulting from the removal of the testicles, which had existed for more than a year. The sinuses in one case healed after the fourth dose of vaccine, and the other after the sixth dose. In a short time they all regained their normal weight and health. The urine of five of the cases still shows signs of a slight infection. Two of the cases are entirely well. The results in one of these cases were almost miraculous. Patient, male, age 35. Had had tuberculosis of both kidneys, bladder and both testicles for more than two years. At the time the vaccine was prepared the patient was bed-fast. Had a sinus resulting from removal of testicles the year previously. Had lost considerably in weight and was urinating every half hour. After the fourth dose of vaccine, the sinuses healed entirely, the urinary symptoms had practically disappeared and the patient had gained ten pounds in weight. After six months of vaccine treatment the patient had gained 60

pounds and returned to work.

Thus I have attempted to give you the essential of an efficient autogenous vaccine, its method of preparation, and some idea of its field of usefulness.

DISCUSSION.

H. J. Farbach, Louisville: Dr. Allen has given us one of those papers which will do most good at a medical meeting. He has given us his actual experience. He has reported his results in the cases in which he has had the pleasure personally of making the vaccine, using it, and observing the results. The method he has described is one that is used by all workers in vaccines. There is one advance that has been made which he did not mention in vaccine therapy, and that is the so-called sero-bacterines, with which one of the pharmaceutical houses has been doing so much lately. The advantage of the sero-bacterine over the autogenous vaccine is that you can give the doses closer together, and perhaps larger doses, without producing the so-called reactions of vaccine therapy; and a simple suggestion in the use of sero-bacterines is the preparation of the sero-bacterin with autogenous vaccines. Have the autogenous vaccine prepared as described, collect twenty c.c. of the patient's blood in a sterile container, put in an ice box for ten or twelve hours, then pipette the serum with a sterile pipette, handle it with absolute asepsis, and add equal amounts of the autogenous vaccine to equal amounts of the serum, and then use twice as much volume as your laboratory man has told you to use of your autogenous vaccine. In that way, you can make your own sero-bacterine, which will probably be more efficient in its action than any commercial product.

J. H. Caldwell, Newport: Vaccine therapy is a subject I have been extremely interested in since it was first advocated by Wright and the opsonic index was discovered, or rather the theory brought forth. I believe it was the opinion of the authorities that no one could use vaccine therapy unless he was capable of making a test of the opsonic index, but that idea has been given up. It was thought this was something that was almost out of the reach of the ordinary practitioner, but I think a great many men are using vaccine therapy at present. As for the autogenous vaccines and the preparation of them I can say nothing because I have not had the experience. The therapy of vaccines, however, I have had some experience with, mostly with stock vaccines. I believe, as the Doctor has brought forth in his paper, autogenous vaccines are probably the best to use if you are in a position where you can get them or get some one to make them for you. There is no one who can do this unless he has been trained for this, particular work. There is only one objection to the autogenous vaccine, and that is, if you want a vaccine for

an acute case, possibly when you first see it, by the time you get the autogenous vaccine prepared it may be too late. I believe in such circumstances you may use stock vaccines with some good results.

I have used stock vaccines from the staphylococcus germ more than any other kind, because these are the kind of pus cases we get in surgical conditions. That is the reason I have had more experience with those particular vaccines. While it may not be scientific to use shot-gun prescriptions of various drugs, it is proper to use mixed vaccines as they are not incompatible with each other and do no harm. I have used the mixed staphylococcus vaccine a number of times with excellent results, and I was not able to say whether it was the staphylococcus aureus, albus, or citras, that was causing the trouble, but I took a chance on its being one of the three, and gave all three. I have often taken smears of pus from discharging wounds, and stained with methylene blue then glancing over the field with the microscope it gives you an idea as to what the predominating germ is that is present, and I have found that in most cases the staphylococci predominated, although that is not isolating different strains of staphylococci.

I have changed my mind in regard to the different infections or cases that are discharging pus or have an abscess somewhere in the body. When I left college the prevailing opinion, I believe, was that the majority of cases were due to the streptococcus, especially the bad infections, where the body is being overwhelmed with toxins and we were taught generally the streptococci were the cause; that the streptococci were more virulent than the staphylococci. I have often used streptococcus serum and have seen it used numerous times, and never saw any good results from it. However, I do not think it has done any harm, but it did no more good than if sterile water had been injected. There are cases in which it may do good. If you have the particular strain of serum made from streptococci it will do good. I believe ninety per cent. of our ordinary infections in surgical conditions are due to the staphylococci instead of the streptococci. I do not believe that there is more than one-tenth of our septic cases that are due to the streptococcus.

Virgil E. Simpson, Louisville: While I am personally much interested in the purely technical side of laboratory work, and would dislike to undertake the practice of medicine without the use of my laboratory, yet I take it, here we are interested in the practical phases of this question.

Vaccine therapy should be looked upon as definite, specific therapy. It can only be used as such, and benefit can only be so obtained when a definite identification of the organism causing the trouble has been accomplished by bacteriological examination. It is true, that there are

some conditions in which it is impossible for us to obtain access to the site of infection, and as a consequence laboratory investigation cannot be undertaken. In such cases, reasoning as the essayist has just done, the majority of them are due to certain organisms, as have been demonstrated by observations of clinicians, and stock vaccines may be used, and sometimes result in some benefit; but if stock vaccines are used in such conditions and benefits do not accrue in accordance with the expectations, do not deem vaccine therapy as a rational procedure. Probably the failure in this particular case may be due and is due no doubt to the fact you are using the vaccine of a certain kind of organism, whereas the disease you are attempting to combat may be due to some other sort of organism or organisms. This cardinal principle must be borne in mind with reference to vaccine therapy; a vaccine made from staphylococcus organism is absolutely futile and impotent in the treatment of streptococcus infection, and vice versa. Again, the use of typhoid vaccine in a malarial condition is worse than time wasted; that vaccines merely because they are vaccines do not increase the innate resisting power of an individual against the invasion from which he is suffering unless you are using a vaccine grown from that particular organism.

Another practical feature is that there are certain diseases or clinical entities in which it has been demonstrated that stock vaccines are quite as useful as autogenous vaccines. Autogenous vaccines require time and a laboratory particularly adapted for their manufacture, and all physicians are not so equipped. In typhoid fever, for instance, a stock vaccine that is used as a prophylactic measure in the prevention of typhoid fever has been proven to be effectual in establishing immunity against typhoid fever.

The same is true with reference to tuberculin. Tuberculin used as a stock preparation, with proper dilutions, in the hands of men who are engaged in this work as a specialist, and who have opportunity of observation of a number of cases to justify conclusions, have proven that it is almost, if not equally as effective as would be tuberculin from an autogenous preparation.

With reference to tuberculosis, it has been my observation that a great deal of trouble we have as internists in the management particularly of pulmonary tuberculosis, is the so-called mixed infection with which we have to deal. Tuberculosis of the lung in and of itself causes but little febrile manifestation. It is the staphylococci and the streptococci, the pneumococci and micrococci catarrhalis and other organisms that find a suitable soil for their propagation that produce febrile manifestations that so rapidly devitalize our patients, and render whatever measure we may adopt towards the restoration of health of the individual, so far as tuberculosis is concerned, futile. In such cases I have found clinically that

a careful bacteriological investigation of the sputum of these patients, determining the kind of infectious organism that is associated with the tubercular infection, and when the use of an autogenous vaccine to get rid of the so-called mixed infection, will accomplish a great deal. In other words, to clear the deck for action, as far as possible, get rid of the accessory infection, and then we have to deal only with the tubercular organisms. Such a condition lends itself much more readily to those measures and means which experience has taught us in the way of rest, sunshine and fresh air, and nutritious diet, which will cause a satisfactory arrest of the condition.

If a few of these practical facts can be borne in mind, it seems to me the place of vaccine therapy would be definitely established much more satisfactorily and much sooner than might otherwise occur.

J. D. Allen, (Closing): In regard to the use of stock vaccines, I have seen some brilliant results from them, and I always recommend their use while an autogenous vaccine is being prepared, especially in acute conditions where some time is required in the preparation of an autogenous vaccine.

One point of interest in regard to vaccine therapy with reference to tuberculosis of the genitourinary tract is the use of tuberculin in conjunction with the vaccine. I do not think in advanced cases tuberculin should be used in conjunction with the vaccine for the simple reason that vaccine in causing a reaction at the point of infection liberates a certain amount of tuberculin. That is to say, the patient inoculates himself. We all know that tuberculin is a very toxic agent and when used in excessive doses does harm. So in these advanced cases it is wise to care for the mixed infection with a vaccine, and then later use tuberculin.

In regard to the use of sero-bacterins, suggested by Dr. Farbach, this is rather a new field. The object of the use of a sero-bacterine, as brought out by Dr. Farbach, is to diminish the amount of reaction. However, this is not as practical, I think, as the use of a simple autogenous vaccine, beginning with a small dose and gradually increasing, for by this method of procedure the reaction will amount to very little.

The Dietetic and Hygienic Gazette, which is just completing the thirtieth year of its existence, has been purchased by The Critic and Guide Company, and beginning with January, 1915, will be consolidated with *The Critic and Guide*, and the combined journals will be under the editorship of Dr. William J. Robinson. The offices of publication are at 12 Mt. Morris Park W., New York City.

LACERATIONS OF THE PERINEUM.*

By HUGH D. RODMAN, Bardstown.

Lacerations of the perineum is an accident of childbirth which occurs in the hands of every physician who delivers babies; whether he be the country doctor, depending wholly on his own skill and judgment, or the college professor, who is regarded as an expert, and who can call to his aid, in a few minutes any number of his "expert" associates. The best accoucheurs in the world have reported lacerated perineums. And the most humble back-woods-doctor, will tell you that he sometimes has a torn perineum but not often. I shall class myself between these two, that is the teacher of obstetrics and the back-woods-doctor, and I say that I frequently have lacerations of these parts.

Obstetrical writers divide these tears into four varieties. This is well enough in a descriptive sense, but for all practical purposes we need no division of this injury; a tear is a tear and should be repaired; it matters not to what division or variety it may belong. I shall not include in this paper the tear of the mucous fold known as the fourchette, which some authors say is torn in all primipara, if this is torn it is of but little importance and does but little or no injury except as a nidus for sepsis. The tears with which we are concerned and which give the doctor and patient both great anxiety are those which divide the muscles and integument. It matters not for how short a space. All such tears are serious and should have our attention at once. We should always go prepared to repair a torn perineum and not leave it to fate or for the future work of a surgeon. Just how often lacerations of the perineum occur it is impossible to say; but that they occur very much more frequent than many of us are aware is certain, and this accident cannot always be avoided even in the most skillful hands and under the most judicious treatment is also certain, and that it happens very much oftener in primiparous than in multiparous women is also certain. Schroeder observed that it occurred in 34.5 per cent. of primipara and about 9 per cent. of multipara. Balandin says that it happens in about 26 per cent. of primipara and about 4 1-5 per cent of multipara, while Olshausen believes that 21 per cent. of primipara and about 5 per cent of multipara are torn. My own observation teaches me that in every 100 primipara deliveries at least 30 are lacerated, and 4 or 5 in every 100 multiparous cases.

Causes: Certain anatomical conditions of the maternal parts are especially liable to this

*Read before the Nelson County Medical Society.

accident. A large open pelvis with a sacrum as straight as a male sacrum in which little or no resistance is offered to the descending foetus, permitting the uterine contractions to force it violently down onto the perineum, which yields to such force and is torn. We have all seen that the vulval opening differs greatly in different women. In some it is almost on a line with the trunk and in others, is nearly at right angles with this plane; or to make this plainer, in some women the direction of the vaginal canal is nearly parallel with the axis of the pelvic cavity. In such conditions the descending head meets but little or no resistance, and active and strong uterine contractions force the head violently down on the unyielding perineum, and it is bound to tear. The extreme smallness of the vulva is another cause of lacerations. The average size from the clitoris to the posterior commissure is one and a half inches. I have seen cases which would not admit of but one finger on an examination. In this condition a tear is almost certain. On the other hand an excessively large head or shoulders of the baby is liable to tear the perineum. Certain presentations of the foetal head are liable to lacerate the perineum when forced against it by active and frequent uterine contractions. In a vertex presentation where the occiput rotates backward into the hollow of the sacrum, which places the largest diameter of the head in a position to pass first through the vulva; also in face presentations, where we have the longest diameter of the foetal head being forced against the perineum, first, and the face being a bad dilator, we are almost certain to have a tear. When the labor is too rapid from the severity and frequency of the uterine contractions and especially if the sacrum is less curved than usual the head is driven through the vulva before the perineum has time to extend and a tear is the result. And if the labor is too tedious and the head remains a long time in the lower strait until the perineum becomes hot, dry, congested, and unyielding, and we proceed to bring about a rapid delivery, either by some of the oxytocides or by the unskilled use of the forceps, we may be sure of an extensive rupture of the perineum.

In excessively nervous women who will strain their very hardest, in spite of our advice not to do so, thereby forcing the head hurriedly against the perineum and through the vulva before the parts are dilated, we may look out for a serious tear. There are many other causes for this accident, but I will mention only one other, which is the unskilled or careless use of the forceps. This probably causes more lacerations of this part of woman's anatomy than all other causes combined. Gentlemen, I want to say to you that the perineum is frequently torn in deliv-

ering the shoulders. I have seen a number of cases, in which I am sure the head passed over the perineum safely, and when I went to adjust things about the vagina, I found a serious tear. A notable case of this kind occurred in my hands a few months ago. A primipara who had been in labor for several hours, without satisfactory results. I made up my mind that a high forceps delivery was necessary and asked for a consultation. Dr. Gore was at once called. He agreed with me, and chose to give the anaesthetic. When she was well under chloroform, I adjusted the forceps and made intermittent tractions when the contractions came, until I was well nigh exhausted, when we exchanged positions, and after several minutes pulling and manipulating, he succeeded in bringing the head into the world, and after removing his forceps we both made an examination of the perineum and congratulated ourselves that we had no fear, the shoulders were hard to deliver and when delivery was complete, we discovered to our sorrow that the perineum was laid open through the sphincter ani. So we cannot be sure that we will not have a tear till the second stage is complete.

Prevention: The question of the greatest importance now, is what means have we of preventing this accident from the various causes mentioned and not mentioned. The old works on obstetrics all taught that to support the perineum was an absolute duty of the attending physician. But in recent years that idea has changed. Writers now say that support does no good. I cannot agree with this opinion. I believe that the palm of the hand against the perineum at the proper time does good. Williams advises that the best measures of preventing this accident is to place the thumb and three fingers against the vertex just as it begins to distend the vulva and in this way make forcible pressure against it during each pain thereby holding it back until the perineum is fully relaxed and yieldy, and in this way prevent the sudden rush of the head against the unyielding perineum. There are a number of other modes recommended to prevent this accident but none of them are eminently satisfactory. Quite a number of devices, one of which I will show you, have been invented to protect the perineum, but all are no good.

The best prevention of this accident in my hands is summed up in two words, support, and chloroform. Support applied in the following manner will do good. Apply the tips of two or three fingers of the right hand just behind the anus, and during the pain draw the anus and the entire perineum forward. This brings the palm of the hand directly against the distended perineum, to which firm pressure should be made during the entire

time of the pain. During the rest between pains make gentle friction to the perineum with the palm of the hand. Keep this up till the occiput begins to force through the vulva, then put your patient thoroughly under the chloroform and let the head pass slowly over the perineum. If you will follow this practice up closely, you will in many cases prevent a tear. Chloroform should be given in all cases where there is danger of a torn perineum. It is a good preventive of this accident.

Treatment: We have done our best to prevent a tear and have failed. What are we going to do now? Send for a surgeon? No! Sew up the tear yourself. Every physician should carry in his obstetric bag, a needle holder, a strong pair of hemostatic forceps will do, a few curved and half curved needles, some good twenty-day catgut sutures. As soon as your labor is over, placenta delivered, parts thoroughly cleansed with an antiseptic solution, plug the vagina tightly with antiseptic gauze and proceed to sew up closely and neatly the torn parts, cover thoroughly the seam with sterate of zinc, remove the tampon from the vagina, place a thick fold of gauze over the vulva and the perineum, tie the patient's thighs together, instruct the nurse to keep her clean and use freely the zinc dusting on the tear, keep the bowels quiet for two or three days, empty the bladder with the catheter for 48 hours if possible and in 99 out of every 100 cases you will have good results.

Friedmann's Treatment of Tuberculosis.—Wolff reports discouraging experiences with Friedmann's remedy, which he applied in 60 cases of pulmonary tuberculosis. Among 47 patients weighed at intervals, 28 lost weight, some losing from 8 to 22 pounds during the course of the treatment. Seven of the patients have died since. He gives the details in regard to the symptoms and Roentgen findings in 26 cases before and for several months after treatment and reviews his extensive experimental work with the Friedman remedy, saying in conclusion that the experiences of the last thirty years in the treatment of pulmonary tuberculosis have all proved so disappointing that he thinks the victims of tuberculosis should be left in peace now and not have their hopes being constantly aroused with new remedies, only to be dashed down again with most disastrous consequences for the patients.

TREATMENT OF DISEASES OF THE BREAST.*

By GUY P. GRIGSBY, Louisville.

My dealing with the treatment of the various lesions of the breast in my limited time, will necessarily be superficial in its scope. I wish to acknowledge the liberal use of Rodman's Diseases of the Breast. As a matter of convenience I have arranged them as follows: Congestion and engorgement, acute mastitis, chronic mastitis, acute and chronic abscess and tumors of the breast, benign and malignant.

The treatment of congestion or engorgement, so-called caked-breast, usually occurs about three or four days following labor. Pressure and irritation at times is so great as to cause a slight rise in temperature that may be suggestive of suppuration. Hot, moist applications to the breast in the form of stupes and gentle massage with the object of emptying the breast is used. The effect of massage is best accomplished by the application of a flannel moistened with a hot, boric acid solution, applied to the breast and the massage being carried out while this is still in position. I would add a word of caution, and that is, that all applications and treatment of the breast should be done with utmost cleanliness, otherwise infection will ensue with a formation of an abscess. The breast may be gently rubbed with a mixture of benzoate of lard and lanolin: this to be sterilized by boiling before each application. The breast should be supported by a bandage. Later as the congestion subsides, pressure may be used, accomplished by the insertion of cotton or wool beneath the bandage.

Mastitis, Acute.—Prevention of this condition should be our endeavor and this may be accomplished by the rigid cleanliness of the breast and nipples before and during lactation. Prevention of fissures and their proper treatment will diminish greatly the occurrence of mastitis and abscess. It is quite unnecessary for me to mention to you the proper care of the breast and nipples during the nursing period. It consists mainly of cleanliness of the baby's mouth and the mother's breast. If despite this precaution, the nipples become inflamed, a shield may be worn or some bland ointment may prove of benefit to prevent or cure fissures of the nipple.

The treatment consists of combating the inflammation by the use of hot moist applications, supporting breasts, discontinuance of nursing, use of breast pump, application of aluminum acetate or lead water. If these measures are unavailing and an abscess occurs, a

*Read before the Nelson County Medical Society.

free incision and drainage may be necessary. It is sometimes advisable in superficial abscesses to make a small incision and by the use of an instrument or tip of the finger to open up all the areas of infection; this may prove sufficient. Incision should be made to radiate outward from the nipple in order to keep from dividing the lacteal ducts. Drainage may be necessary and a counter opening may be indicated. Abscesses are located superficial, in the gland itself, or beneath it. The abscess should be opened at its most dependent point to favor drainage. It is sometimes possible to make the incision at the juncture of the breast and the chest wall; this obviates the presence of an unsightly scar. In those cases in which spontaneous rupture has occurred, one or many sinuses are usually present. These should be curetted thoroughly. Sometimes it is found necessary to excise them with some of the surrounding tissue. We are very prone in this class of cases to delay until extensive destruction of tissue has occurred, while an early incision would have saved the loss of gland tissue and much pain to the patient.

Chronic Mastitis.—There is much discussion still as to the etiology and the pathology of this condition and the treatment of the same is equally unsatisfactory. This is particularly true of those cases occurring without any well defined cause. Use of compression, iodine and belladonna ointment in equal parts or a phenol-glycerine 5 per cent, sometimes seems to favor resolution. In older patients amputation of the breast is advised because of the fear of malignancy.

Chronic Abscess.—As soon as the presence of the pus is discovered, incision and evacuation of same is indicated. Drainage should be maintained a little longer in order to allow the gradual obliteration of the abscess cavity. Diagnosis of this condition usually gives more concern than the treatment, since this may be mistaken for a malignant affection.

Tuberculosis.—The treatment of this condition is open to much discussion, namely, as to the advisability of conservative measures. There are perhaps cases in which the disease is limited to a small portion of the breast, in which the excision of the diseased portion would be comparatively a safe procedure. Unfortunately, this seldom occurs and since there is no way to tell as to whether the disease has not already invaded other portions of the breast, it would seem that the safe procedure in cases in which there was doubt, that amputation of the breast should be done. Tuberculin has been used and some observers report rather favorably. I personally have never used it. Biers passive hyperemia induced by the means of a large suction cup would appeal as a very hopeful conservative measure in tuberculosis of the breast. It has

proven efficacious in bone and joint tuberculosis and this would seem a place where it could be used to advantage. It should be used for five minutes at a time until the breast is a deep red color and then removed for five minutes, then reapplied for five minutes. The application by this method should extend over a period of forty-five minutes to an hour, daily.

Diffuse Hypertrophy.—The course of this disease is usually progressive, since it is due to a diffuse fibroma. Therefore, any results from local treatment should hardly be hoped for, and the logical treatment would necessarily be surgical. In fact amputation of the breast would seem to be the treatment indicated. In cases associated with pregnancy, expectant treatment is indicated, for often these cases will subside after delivery.

Tumors of the Breast.—Regarding treatment of tumors of the breast they are divided into benign and malignant growths. Unquestionably diagnosis of breast tumors and especially an early diagnosis is of vast more importance than the treatment. There has been so much written lately in regard to cancer, its diagnosis and treatment that there is a constantly increasing hope that something definite regarding diagnosis and treatment will emerge from the scientific investigations and experiments that are being carried on at the present time. Our diagnostic methods by means of the microscope are at present very accurate. Up to the present time, however, there is no definite means of determining the fact of malignancy or the benign nature of the tumor of the breast while it is in situ. Two facts, however, are clearly shown at the present time, one is that cancer is steadily on the increase and the only form of treatment of definite value is a wide removal of the diseased area while it is still a localized condition. The proportion of cancer to other tumors of the breast is about 80 per cent. and among the other 15 to 20 per cent. there is included other forms of malignancy such as sarcoma, and other new growths that early manifest the tendency to become malignant. So that it leaves us the startling fact that there are nine chances to one that a breast tumor is malignant. We are not interested particularly in the treatment or the diagnosis of these cases of carcinoma of the breast whose nature is hopelessly obvious to anyone, because these cases can only, very exceptionally be cured by the most skillful efforts. They are usually doomed when we see them. It is cases that may, or may not, be carcinoma, that should be our chief concern. The cases so little pronounced that if they are really malignant they afford a reasonable chance for treatment. Unfortunately, it is in the simple conditions, namely of chronic mastitis, cysts, and other benign

conditions of the breast that the danger lurks. For believing they must represent these conditions, they go unrecognized, until the time of golden opportunity has passed for a reasonable hope of a cure. Furthermore, although we are assured of the innocence to-day of a tumor of the breast, who can say that by next month it will not be malignant? The important thing then is the diagnosis in these cases, since the treatment, namely, conservative or radical depends upon the diagnosis. Gibson has given in part the proper procedure in breast tumors that are termed borderline cases. Small stationary tumors that do not cause physical or mental disturbances in young individuals up to thirty years of age are to be regarded with suspicion, but need not be removed if there is any special reason for not so doing. However, any growth, at any age, that shows the tendency to increase in size rapidly or steadily should be removed, if for no other reason than the necessity of anticipating severer operation, proportionate to an increasing bulk. I do not wish by this to establish a sense of false security in this class of breast tumors because we must bear in mind that these tumors are or may become malignant at any period of life. Beyond thirty years of age any definite lump should be removed and subjected to a thorough microscopical examination. The treatment of tumors whose benign nature has been determined and removal is expedient, a plastic operation popularized by Warren is the one of choice. This consists mainly of the manner of making the incision, namely, beneath, at the juncture of the breast and chest wall. By this the scar is hidden from view. In those tumors in the upper quadrants and superficial, a simple incision is perhaps the easiest and best. In all operative procedures for benign growths the tumors should be removed in toto if possible, but with as little destruction of the gland tissue as is consistent with a complete removal. This is best accomplished by taking out a wedge that includes the mass. If there are multiple foci there will be less of gland tissue if several wedge-shaped incisions are made. It is advisable at the time of removal to have a competent pathologist to make a frozen section and if the report is one of malignancy then one should proceed with the radical operation of removal of the breast with its lymphatic. This method, however, is questionable, and a final decision should not come from the pathologist until he has examined several specimens from different portions of the tumor. As to the treatment of malignant conditions of the breast, early and complete removal while the disease is still a local condition is the only positive cure that is known at present. That all cancers have a pre-cancerous stage

will admit of no argument. If the cancer could be removed at that period this would be a big step towards the complete eradication of the cancer problem. In other words, the time to treat a cancer is before it becomes a cancer. We have learned our lesson in appendicitis, obstruction and other acute abdominal conditions as to the necessity of early operation, and it is to be hoped regarding cancer, that the same truth will be molded into some standardized procedure by the profession and this in turn be accepted by the laity. One might question this as being ultra radical, but since it is the only safe and sure procedure at present and, until some other means less radical with as positive results are advanced it is the only sane and sensible course to pursue. No one can deny that if this is carried out conscientiously that there is small doubt that the deaths from cancer would be materially decreased. As to the operative procedure, an incision is devised to suit the individual case, that will seem to give the best chance of the closure of the wound after removal of the diseased area. The axilla should be first cleaned out for the following reasons:

(1). Lymphatics may be so involved that further operative procedure would be futile. The sooner this is known the better.

(2). Blood vessels may be tied at their origin, thus preventing shock and hemorrhages.

(3). The danger is eliminated or largely so of expressing or distributing cancer cells into the adjacent structures.

(4). Functional use of the arm will be better by beginning at the axilla because greater precision is insured.

The incisions should not extend beyond the axillary folds as the scar may interfere with free movement of the arm. After the axilla has been thoroughly cleaned, this is followed by the removal of the breast, including the pectoral muscles. There is hope that some agent will be discovered or some means devised by which the mutilating radical operation for this condition may be avoided. At the present time radium seems to hold the stage and there is some hope that it will prove a most efficacious means in combatting this disease. Abbe, in a recent article, speaks very encouragingly of his use of radium during the past ten years. He does not advise, however, its use only in those cases after the operative period. He also advises the use of it as a prophylactic measure following operation.

INTESTINAL CATARRH.*

By O. P. GOODWIN, Pleasureville.

A catarrhal inflammation of the whole or part of the intestinal tract. It is an infection or intoxication produced by hot weather, sudden changes of temperature, improper or decomposing food or milk, over eating, impure water, or water not accustomed to. Secondary, from gastritis, infectious diseases, portal engorgement.

Predisposing causes. Age, children and aged being more liable to the disease. Unsanitary surroundings, especially in hot weather. Symptoms: Diarrhea, colic abdominal pains, gaseous distension of abdomen, rumbling and gurgling noises, vomiting, elevation of temperature, furred tongue.

Discharges at first consist of fecal matter, followed by watery irritating fluid, the stools varying from three or four to ten or more, increased by taking food. The stools present a yellowish brown or greenish color, very offensive, in advanced cases dysenteric in character, painful tenesmus, stools small contain blood and mucus, loss of appetite, thirst present.

Physical Examination. On inspection tympanic distension, tongue dry and furred. Palpitation, considerable tenderness, fluctuation if much fluid present.

Percussion. Tympanitic resonance varying with tension of bowel. Severe forms have loss of flesh, weakness, high temperature, headache, prostration, general disturbance of health.

It is important to localize the disease, whether it be duodenum, ileum, colon or rectum.

In duodenum constipation often present in place of diarrhea with colon not affected. Usually gastritis, with nausea, vomiting, gastric pain coexists. Small intestine—absence of much diarrhoea, presence of colicky pain, rumbling, distention of area of small intestine, stools contain undigested food, bile and small masses of mucus.

Colon. Considerable pain, diarrhea, tenderness over colon, soup-like stools, mucus in large masses indicate that the trouble is in the colon.

Rectum. Large quantities of mucus and pus, painful tenesmus indicate inflammation of rectum.

Prognosis. In uncomplicated cases favorable, occurring in extreme ages and delicate subjects often endangers life. Duration three or four to ten or more days. Treatment. In mild cases due to errors in diet a mild purgative, restricted diet is all that is required. Rest in bed, calomel followed by saline to clean

out the intestines, salol, pepsin with a little phenol to quiet gastric complications. If stools are watery and odorless and colon empty, salol, bismuth and opium to control pain. When stools dark, considerable odor, mucus and blood zinc phenolsulphonate, bismuth subgallate with copper arsenite. Colon irrigation once or twice daily, enemas of starch water and laudanum.

Food should be given at regular intervals, milk, eggs, cocoa, soups, predigested foods, beef juices when appetite reduced. If constipation, fruit juices may be allowed.

Tonics. Iron, arsenic, strychnine, cascara to move bowels.

COUNTY SOCIETY REPORTS

Boone—The Boone County Medical Society met at Union, Wednesday evening, October 21st, with O. E. Senour. Those present were Drs. Langdale, McKim, Jones, Cofield, Phinney, and Hafer of Cincinnati. Dr. Furnish of Covington, Drs. Slater and McChord of Ludlow, Drs. Slater and Blackerby of Erlanger, Drs. Menefee and Foreman of Walton, Dr. Grant of Florence, Dr. Hays of Blittsville, and Senour of Union.

After a lunch was served the meeting was called to order by President B. K. Menefee.

C. C. Jones, of Cincinnati, read a paper on "The Treatment of Ear, Nose and Throat During the Acute Infections." This was a very practical and instructive paper and was thoroughly discussed by several present.

H. H. Hays read a paper on "Whooping Cough" which was also very practical and enjoyed by all present and brought forth good discussions.

After a very enjoyable social session the meeting adjourned to meet at Walton with Dr. Menefee on the third Wednesday in November at 7 P. M.

O. E. SENOUR, Secretary.

Bell—The Cumberland Valley Medical Society met with the Bell County Medical Society on October 9th, 1914. The following doctors were present: J. H. Parker, U. G. Brummett, J. T. Evans, Jacob Shultz, O. P. Nuckols, F. B. Burton, J. W. Parker, T. H. Curd, C. A. Moss, Edward Wilson, C. K. Broshear, J. P. Edmunds, C. F. Clayton, L. L. Robertson, J. G. Foley, and Dr. Craig.

Chas. F. Clayton read a very instructive paper on "Vaccines and Serums" which was thoroughly appreciated by all present and the discussion in which all present took part brought out some very interesting points in the use of vaccines and serums.

J. G. Foley made a talk on public health and

*Read before the Henry County Medical Society.

told us some of the many things the Bell County Board of Health is doing.

Lewis J. Jones not being able to attend sent in an excellent paper on "Chole-cystitis," which was read and discussed.

There being no further business the meeting was adjourned.

C. A. MOSS, Secretary.

Bullitt—The Bullitt County Medical Society met at the courthouse in Shepherdsville, at 10 A. M., October 26, 1914. The forenoon was taken up by case reports and general discussions, all present participating.

The Delegate to the State Meeting reported that he was unable to reach Newport on account of an accident on the way. However, other members, who had been at the meeting, reported some points of the Newport meeting and same was discussed.

After a good meal at the O'Brien House, the society reconvened as an open meeting at 1:30 P. M. Notices had previously been sent out and a very nice crowd was a hand. Senator J. R. Zimmerman made the address of welcome, Dr. G. C. Hall, of Louisville, made an address on the subject, "The Necessity of Regular School Inspection." Dr. Hall used charts and illustrations and it was very interesting and helpful to all.

Judge E. A. Funk, spoke as one of the County Health Officers, upon the sanitary conditions of the county in general. He took up the past, present and future conditions as he saw it, and his talk was both instructive and entertaining. The other two Health Officers, Drs. **Geo. Kirk** and **S. W. Bates**, made brief addresses.

C. Z. Aud was to make an address but could not be present.

Others who took part in the discussion were: J. W. Dodds, Bardstown Junction; R. I. Kerr, Belmont; S. H. Ridgway, Shepherdsville; Arthur Bates, Beuchel; W. W. Hill, and Jas. S. Lutz, both of Louisville; Prof. Ora Roby, Superintendent of County Schools; Mr. Lindsey Ridgway, County Clerk; Robert Smith and Mrs. R. L. Troutwine, all of Shephersville.

The entire meeting was a very pleasant one and we hope shall arouse the entire county before its influence shall die out. We expect to hold another meeting next spring and continue the good work of educating and improving our county along the lines of health and sanitation.

R. I. KERR, Secretary.

Carlisle—The Carlisle County Medical Society met at Bardwell, December 1st, 1914, in the Odd Fellows and Masonic Hall, with the following members present: President J. G. Dunn, W. Z. Jackson and R. T. Hoeker of Arlington; H. A. Gilliam, Milburn; W. L. Mosby, H. T. Crouch, G. W. Payne and T. J. Marshall, of Bardwell; W. I. Poole, of Berkley and D. S. Robertson, of Cun-

ningham. The last two named becoming members at the meeting.

W. Z. Jackson read a paper on "Pott's Fracture." He gave a complete picture of the fracture and its treatment.

G. W. Payne opened the discussion by going into the anatomy of the fracture. Mosby, Crouch and Marshall also discussed the paper, Jackson closing.

W. I. Poole read a very able and brief paper on "Treatment of Pneumonia." He insists on fresh air and proper nourishment in the management of his cases, using drugs as indicated.

Discussion by Drs. Crouch, Mosby, Hoeker, Gilliam, Payne and Marshall. Nearly all use carbonate of creosote in the treatment.

H. A. Gilliam stated he hadn't lost a case of pneumonia under 3 or over 60 years, in his practice within the last five years.

J. F. Dunn read a paper on "Epidemic Sore Throat." He is in the midst of an epidemic of this kind now. He asked that the paper be discussed. The essayist thinks that his cases are tonsilitis, while others in near localities had been having an epidemic of diphtheria. Mosby, in discussing the paper agreed with the essayist that a great majority was tonsilitis, while Payne and Marshall argued that more than likely a large per cent. were diphtheria. Crouch, Jackson, Poole, Hoeker and Gilliam also discussed the paper.

The following officers were elected for the next year: President, H. A. Gilliam; Vice President, W. I. Poole; Secretary, T. J. Marshall; Treasurer, G. W. Payne; Censor, D. S. Robertson.

The Society adjourned to meet in Arlington the first Tuesday in March.

T. J. MARSHALL, Secretary.

Christian—The Christian County Medical Society met in regular session, Tuesday, November 17th, in Hopkinsville, with the President presiding.

The members present were, Drs. Watts, Rozzell, Gaither, Jackson, Reynolds, Keith, Beazley, Rice, Laey, Southall, Backus, Gates, Sargent, Caudle, Rudd, Lovin, and Sandbach.

E. L. Gates reported a case of "Infantile Paralysis in a Three-Months-Old Child." Discussed by Drs. Bell, Sargent, Caudle and Keith. Dr. Keith asked what position should the physician take in reporting a case of infantile paralysis?

Andrew Sargent read a very interesting and well prepared paper on "Spondylotherapy." He prefaced his paper with a short history of "Spondylotherapy" and how he became interested in the subject. He referred freely to noted authorities on the subject and after Dr. Caudle offered himself as a subject he demonstrated his method of lowering and raising the pulse rate. The essayist proved himself master of his subject and was the means of bringing out one of the most interesting discussions of the year, of which Drs.

Reynolds, Keith, Rozzel, Rudd, Backus and Sandbach took part.

At this point, the program being completed, Dr. Keith stated that the Metcalfe Committee was ready to report. The Chair appointed Dr. Keith the Chairman of the Committee to bring Mr. Metcalfe, our esteemed friend, before the society. When Dr. Keith entered the room with Mr. Metcalfe, Dr. H. C. Beazley, as spokesman for the society, presented a handsome chest of silver to Mr. Metcalfe in the following words:

"Mr. President: We have with us to-day a gentleman whose acts of kindness, hospitality and whose genial personality have endeared him to each and every member of the Christian County Medical Society.

"In innumerable ways Mr. T. L. Metcalfe has abundantly proven himself to be a genuine friend of the doctors, and not only to the physicians, but like Ben Adhem; he is the friend of man. Our town, our county, our country needs more men like him.

We stand to-day as citizens of the greatest country on earth and as we stand in view of the monuments of a past civilization, confronting the problems, the carnage and the strife of the present age; we are more disposed than ever to regard America as the field where the ideal and the actual combining their forces, will produce a higher and nobler civilization, than the human race has ever attained. In order to accomplish this, we must have a nation of men—real men, unselfish and unafraid.

"Each of us should be eager to make the history of our nation great, not by military exploits, except to maintain our honor, but by the higher triumphs of art and peace.

"Free men like free states, united by a common brotherhood should rival each other in the glorious task of advancing human liberty.

"The kindly, unselfish and public-spirited life of Mr. Metcalfe is an example to us of what a true citizen of a community should be.

"We reciprocate your friendship Mr. Metcalfe, and we wish to assure you that we esteem the spirit of altruism which has prompted you in the extension to us of so many expressions of favor.

"It gives me great pleasure, to present to you, in the name of the society, this token of our appreciation of your kindness to us. At the same time we wish you to know that neither the words nor the gift can express all that we cherish for you in our hearts."

W. S. SANDBACH, Secretary.

Christian—The Christian County Medical Society met in regular session in the City Court Room, Hopkinsville, Tuesday December 15th, at 1:30 P. M., with the following members present: H. W. Watts, President; W. E. Reynolds, T. W. Perkins, J. R. Paine, T. D. Rudd, M. W. Rozzel, J. B. Jackson, F. M. Brown, J. P. Keith, H. C.

Beazley, O. L. Barnes, J. H. Rice, Andrew Sargent, J. W. Harned, J. L. Barker, Austin Bell, J. G. Gaither, D. H. Erkiletian, F. H. Bassett and W. S. Sandbach.

The minutes of the last meeting were read and adopted and the Secretary made his annual report as follows: Out of 50 active physicians in the county, 44 are members of the society, with an average attendance of 23. With 12 meetings. One member present at every meeting six at eleven meetings and four who had never been present during the year. There has been read twelve papers, 37 case reports and 16 clinical cases.

This being the annual meeting for the election of officers for the ensuing year the President called the election, which resulted as follows:

President, E. L. Gates, of Herndon; Vice-President J. R. Paine, of Pembroke; Secretary-Treasurer, W. S. Sandbach of Casky; Censor, Austin Bell, of Hopkinsville; Delegate to State Meeting, Drs. Sandbach and Keith.

Moved by Dr. Barker, seconded and passed that the society pay the Secretary's expenses to the State Medical Association.

Our retiring President, H. W. Watts, in a few well chosen words, reviewing the work done the present year and the President-Elect, E. L. Gates, outlining the work for the coming year, completed the program for this meeting.

The enthusiasm ran high through the entire meeting and the prospects are bright for a larger better and a more progressive society this year than ever before.

W. S. SANDBACH, Secretary.

Daviess—The Daviess County Medical Society met at the City Hall, Owensboro, on September 16th, with the President, J. M. Stuart, presiding, and thirty-four members present.

A. E. Popham, of Knottsville, was elected to membership.

J. R. McGary read a very interesting paper on "Metastasis."

In discussing the paper **P. D. Gilliam** said: "I think if statistics of cancer were kept we would hesitate to operate. How do we know that it is not a general disease with a local manifestation? We are dependant on our resistant power."

O. W. Rash said, I want to change; I now think that diseased tonsils should be removed. I think they cause rheumatism. I do not think cancer of the uterus is ever cured.

I. J. Hoover said: I think we cure cancer with the knife. Do we know when to do this? No, but I think we should remove it at the earliest opportunity.—I believe a complete hysterectomy will cure cancer of the uterus. All cancerous conditions can be cured by the knife, if done at the right time."

W. F. Stirman said: "I am sure cancer, in the beginning is local, and if you can remove it in

time, you can cure it. We must not wait for vaccines, but use the knowledge we have and act; I have 17 women alive now, on whom I removed cancer of the breast. The last one five years ago, I have more than that many dead. I never remove an epithelioma of the lip that I do not cure it. The time to attack a cancer is when you see it, if it is operable. I believe the operation for uterine cancer is the most hopeless, because that region is, very rich in lymphatics, and all are infected. I think it is hopeless to operate for nterine cancer in patients over 50 years of age."

D. M. Griffith said: "I had twelve cases of rheumatism and cured them by removing the tonsils, some of them had abscesses. In three cases the tonsils seemed normal, but when cut into they were found filled with cheesy material, and when removed the diseased joints got well. Rheumatism is not a disease, but a result. John Murphy said, '75 per cent. of the cases of rheumatism that come to him were the result of tonsilitis, and were cured by removing the tonsils. He always sends his rheumatic patients to a throat specialist. I have lost all cases with cancer of the nose, because the tissues there are so rich in lymphatics. I think Mayo says he cures 70 per cent of cancers, I heard him say if they come to him in time he could cure cancer in any part of the body.'"

W. F. Stirman: "Dr. W. D. Gross did a great harm in teaching that cancer was a local manifestation of a systemic affection. For a long time all surgeons followed his teaching."

J. H. Thorpe read a paper on "Eye Strain." The doctor was called away and his paper was not discussed.

W. L. Tyler read a paper on "Rest in the Prevention and Treatment of Disease."

A general discussion followed.

J. J. RODMAN, Secretary.

Daviess—The Daviess County Medical Society met in annual session December 15th at the City Hall, Owensboro, with the President, J. M. Stuart presiding and thirty-seven members present.

After the minutes of the previous meeting were read, the Secretary-Treasurer made report. Seventy had paid their dues during the year. One hundred and two dollars was in the treasury.

Our Councillor, Cyrus Graham, was present and gave us a good and encouraging talk.

D. M. Griffith reported a case of tracheotomy to recover a lost tooth. He got it but it was so badly decayed could not use it. This case was discussed by several.

This being the annual meeting, the following officers were elected to serve for next year: President, C. DeWeese, Fordsville; Vice President, George L. Barr, Secretary-Treasurer, J. J. Rodman; Delegate, C. H. Todd; Censor, O. W. Rash, Owensboro;.

Adjourned for dinner, which was furnished by the Owensboro Medical Society. It was thoroughly discussed by all present.

At the afternoon session **J. T. Dixon** read a paper on "What is Rheumatism?" which was discussed by several.

The temperature was ten below zero and our former president, J. W. Ellis, was not able to be with us. By a rising vote we sent him words of good cheer with hopes that he would be with us at our next meeting.

J. J. RODMAN, Secretary.

Greenup—The Greenup County Medical Society met at Fullerton, on November 5, 1914, at the Davis Hotel.

Members present, E. R. Fitch, C. E. Vidt, H. T. Morris, A. S. Brady, A. J. Bryson, M. W. Meadows, and A. P. Hunt.

E. R. Fitch read a paper on the Differential Diagnosis of Pregnancy," which was appreciated by all members present.

M. W. Meadows read a paper on "Nocturnal Enuresis," which was very instructive.

A. S. Brady reported a case of Hyperemesis, after which he opened the discussion on the papers followed by Vidt, Bryson, Morris, Hunt, and in closing by Fitch and Meadows.

The officers were elected for the year 1915, as follows:

President, C. E. Vidt; Vice-President, E. R. Fitch; Secretary-Treasurer, A. P. Hunt; Censor for Three Year Term, H. T. Morris; Two Year Term A. J. Bryson.

After the meeting a special dinner was served at the Davis Hotel which was appreciated by all present.

The next meeting will be at Russell, on December 3, 1914.

A. P. HUNT, Secretary.

Henderson—The Henderson County Medical Society met in regular annual session with W. A. Poole presiding and Albert S. Denton, of Robards, acting secretary. The following physicians were in attendance: J. E. Ridley, Robards; E. N. Powell, Corydon; H. S. Zernow, Corydon; Thos. Sellars, Hebbardsville; W. A. Quinn, H. C. Clay, of Anthoston; J. H. Letcher, J. C. Moseley, M. C. Dunn, Silas Griffin, W. C. Galloway, D. O. Hancock, E. L. Busby, of Zion; W. V. Neel, J. W. Stone, Cyrus Graham, Peyton Ligon and W. M. Floyd.

In honor of Archibald Dixon's fiftieth anniversary of his wedding he was elected president of the association for the coming year, and Dr. Letcher was elected vice-president. Both physicians have been president of the county society and the State Association. Their election broke a precedent in the choice of young men and they were elected as an expression of the honor and esteem in which they are held by the county society, and in acknowledgement of their eminent services to the county profession.

Dr. Peyton Ligon was unanimously elected secretary. Drs. Stone, Moseley, Bushby and Powell

were elected delegates to attend the State Meeting at Louisville in 1915.

B. J. NEARY, Secretary.

Henderson—The Henderson County Medical Society met November 23, in the City Council Chamber, W. A. Poole, President, in the chair. B. J. Neary, Secretary, being out of the county, A. S. Denton was requested to act as secretary.

The voters of Henderson county having signified by their votes that they wanted a County Tuberculosis Sanitarium, the County Judge of the county, Judge Young, appointed a board of commissioners composed of Hon. Starling Marshal, A. G. Crutchfield, J. W. Cooper, J. T. Hancock, Mrs. W. S. Holloway, Mrs. F. S. Pentecost and Hon. Odie Duncan. The object of this commission is to select a location, etc., for the proposed sanitarium. The Fiscal Court has already appropriated \$10,000 toward the proposition.

The acting secretary of the Henderson County Medical Society invited C. A. Robertson, of the Watauga Tuberculosis Sanitarium, Tennessee, to deliver an address on "Location, Building and Management of a Hospital of that Character."

Invitations were sent out to every member of the Commission, the county magistrates and the public were notified, through the press of the purpose of the meeting. Unfortunately the meeting was called on the coldest night of the winter and on that account there was a small attendance.

W. A. Poole, president of the society, called on Dr. Arch Dixon to preside during the meeting.

C. A. Robertson gave us the best, the plainest and most practical paper we have ever heard on the subject. In discussion he went into details as to the cost of upkeep, maintaining farm, and many other points of vital interest in the successful management of a sanitarium, as well as care, nursing and sanitation.

It was just such a paper as should have been heard by the Commissioners, and every member of the Fiscal Court, not only of Henderson County, but the counties that are contemplating the building of public tuberculosis sanitariums.

The paper was discussed by the members of the medical society present, and others, and every one showed a hearty appreciation of the address, by a standing vote of thanks to Dr. Robertson.

Members present: Drs. Poole, Dixon, E. N. Powell, Hancock, Denton, Forward, Floyd, Sellars and Graham.

Adjourned to meet December 14, 1914.

A. S. DENTON, Secretary.

Laurel—The Laurel County Medical Society met December 16th, 1914, in Dr. Brock's office, with H. V. Pennington in the chair. The meeting was called to order by the chairman and at once proceeded with the election of officers for the ensuing year, and the following officers were unanimously elected:

President, J. I. Smith; Vice-President, E. E.

Morris; Secretary and Treasurer, Oscar D. Brock. Delegate, G. S. Brock; Alternate, H. V. Pennington; Wm. Johnson to succeed himself as Censor.

W. H. Joyner was elected as member of our society upon presentation of card from Rockcastle County Medical Society.

On motion adjourned.

OSCAR D. BROCK, Secretary.

McCreary—The doctors of McCreary county met and organized the McCreary County Medical Society, October 10, 1914.

The Kentucky State Medical Association sent A. W. Cain, Councilor for this district to organize the society.

On motion of C. E. Cain and seconded by A. Weddle, J. E. Harmon was nominated for President, and was unanimously elected.

On motion by A. Weddle and seconded by R. C. Silvers, W. R. Cundiff was nominated for Vice President, and unanimously elected.

On motion of C. E. Cain and seconded by W. R. Cundiff, R. C. Silvers, was nominated for Secretary-Treasurer, and was unanimously elected by the society.

On motion by A. Weddle and seconded by Fred Silvers, C. E. Cain was nominated for Delegate to the State Medical Association, and was unanimously elected.

On motion by C. E. Cain, and seconded by A. Weddle, W. C. Stephen, Fred Silvers and Ruben Smith were nominated for Censors, and were elected unanimously, to serve for one, two and three years, respectively.

Motion made and seconded that our dues be fixed at \$4.00 per year. Motion carried and the dues were fixed at \$4.00 per year.

Motion regularly made and seconded that we hold our next meeting with C. E. Cain, at Whitley City. Motion carried. The society will meet at Whitley City the second Tuesday in December 1914.

Motion regularly made and seconded that we adjourn for dinner. Motion carried and we adjourn to meet again at 10 o'clock.

Meeting called to order by J. E. Harmon, President.

Program was made out for next meeting: C. E. Cain was to prepare a paper on "Fractures of Upper Extremities"; A. Weddle to prepare paper on "Pneumonia"; R. E. Silver, a paper on "Ethics in Consultation Practice"; and report of cases.

Motion made and seconded that we adjourn. Motion carried.

The following physicians paid their dues: C. E. Cain, A. Weddle, Fred Silvers, J. E. Harmon, W. R. Cundiff, R. C. Silvers.

R. E. SILVERS, Secretary.

Nelson—As per adjournment, the Nelson County Medical Society met in the office of B. E. Gore

at 11 A. M. There were present, Drs. R. H. Greenwell, H. E. McKay, B. E. Gore, S. A. Cox, and Hugh D. Rodman, of Bardstown; J. I. Greenwell, of New Haven; H. S. Harned, of Boston; J. B. Overall, Cox's Creek; J. G. Powers, Fairfield; S. B. Crume, Bloomfield, members of our society, and Drs. C. Z., and Guy Aud, of Cecilian; and Irvin Abell, Bernard Asman and Guy P. Grigsby, of Louisville. The minutes of the last meeting were read and approved.

The election of officers for 1915, was held and resulted as follows:

President, J. I. Greenwell, New Haven; First Vice President, H. S. Harned, Boston; Second Vice President, B. E. Gore, Bardstown; Secretary and Treasurer, Hugh D. Rodman, Bardstown; Censor for three years, S. A. Cox, Bardstown; Delegate, Hugh D. Rodman for two years.

S. B. Crume, of Bloomfield, read a paper on "Pituitrin in Obstetrics."

J. I. Greenwell followed the reading of this paper with a report and discussion of a number of cases in which he had used pituitrin with good results.

J. B. Overall had used it with good results, as a pain producer, and he believed that it increased the flow of urine.

H. E. McKay had used it in one case only, but in this case the result was good. The pains, when he gave the pituitrin, were about 30 minutes apart, and the interval was soon reduced to two minutes and the baby delivered.

R. H. Greenwell had used pituitrin in thirteen cases of labor with uniform good results.

B. E. Gore had used it in one case with good results.

C. Z. Aud discussed its use and warned the profession to be guarded in the use of such a potent medicine.

Bernard Asman had not used pituitrin on obstetrics, but believed it to be a good haemostatic.

Irvin Abell, the three remedies for shock, in the order named, are morphine, saline and pituitrin. Pituitrin is a direct stimulant to the muscular fibres, is a good heart stimulant.

Guy Grigsby had not used pituitrin but little, but regarded it a good muscular stimulant.

C. Z. Aud, our Councilor, addressed the meeting, mostly on the preparation for the practice of medicine, and on the unity and good fellowship which should exist among doctors.

The following read papers: **H. D. Rodman**, on the "Laceration of the Perineum;" **Bernard Asman** on "Contraction of the Sphincter; with Report of a Case;" **Irvin Abell** on "Lesions of the Breast;" **Guy Grigsby** on the "Treatment of Lesions of the Breast." All of the papers were fully and freely discussed.

The Bardstown members of the society entertained the country members and guests at dinner at the Talbott Hotel. This was a good meeting in point of attendance, and from a scientific stand-

point and I hope to report three or four such in 1915.

Adjourned to meet the third Wednesday in March, 1915.

HUGH D. RODMAN, Secretary.

Pendleton—The Pendleton County Medical Society met at the office of John E. Wilson, in Butler on Wednesday, October 14, 1914, with the following members present: Beckett, Blackerby, Blaydes, Brown, Clark, Cram, Hopkins, Nichols, John E. Wilson, W. H. Yelton.

After the usual report of clinical cases, **T. C. Nichols** read a paper on "Typhoid Fever."

W. A. McKENNEY, Secretary.

Pendleton—The Pendleton County Medical Society met at the office of John E. Wilson November 11, 1914, with the following members present: Blackerby, Blaydes, Daugherty, Ellis, Hopkins, Kendall, McKenney, John E. Wilson, Yelton, W. W. Anderson, W. J. Thomasson, of Newport; C. W. Shaw, of Alexandria and Wm. Miller of Cincinnati, were present and lent their aid to making the day one of profit to each of us. We had the usual report of clinical cases, and their discussion. There were no essayists prepared and we had no papers. But all in all we spent a very profitable day.

W. A. McKENNEY, Secretary.

Pendleton—The Pendleton County Medical Society met at the office of John E. Wilson in Butler, on Wednesday, December 9th, 1914, with the following members present: Blackerby, Blaydes, Clark, Daugherty, Eckler, Hopkins, Kendall, McKenney, John E. Wilson, J. Ed Wilson.

The meeting was called to order by President, J. Ed Wilson, and after roll call and the reading of the minutes of the previous meeting we proceeded to the business of the day. Under new business, the following were elected as officers of the society to serve for the year: President, J. F. Daugherty, Secretary and Treasurer, W. A. McKenney; Vice President, John E. Wilson; Assistant Secretary and Treasurer, K. B. Woolery, Delegate, H. C. Clark; Alternate, John E. Wilson.

The following then paid their dues: H. C. Clark, P. N. Blackerby, J. M. Blaydes, J. Ed Wilson, S. M. Hopkins, J. F. Daugherty, L. J. Eckler, C. H. Kendall, John E. Wilson, W. A. McKenney.

We then had a report of clinical cases, after which Dr. Clark gave us a splendid talk on the "Signs of the Times," which was ably discussed by several of the members present.

We then adjourned the last meeting of the year feeling that we had had a profitable meeting as well as a profitable year.

W. A. McKENNEY, Secretary.

Russell—The Russell County Medical Society 1914, at 12:30 P. M. The society was called to or-

met at the Holt Hotel, Jamestown, November 4, der by the President, L. D. Hammond.

Members present: Drs. J. S. Rowe, Hammond, Blair, Flanagan and Scholl.

Minutes of last meeting read and adopted, after which a paper on "Duties of Health Officers, Medical Societies and Boards of Health" was read by **J. B. Scholl**, which was thoroughly discussed by all present.

Then there was a request by several of the laity for the society and health officers to get sanitary privies for public and private buildings. Each member promised to help in the matter. There being no regular program for this meeting for one and a half hours talks by the members and heated discussions about everything pertaining to the welfare of the doctors and laity. Often there would be two or three on the floor at once.

The society adjourned to meet at Jamestown or elsewhere, December 2nd, 1914 at 12:30 P. M.

J. B. SCHOLL, Secretary

Webster—The Webster County Medical Society met at Dixon, November 24. The meeting was called to order by the President, D. H. Cosby. Secretary Roy Osborne, of Sebree. Members present: Drs. Cosby, Osborne, White, of Tilden; Gilbert, Winstead and Smith.

The following is the program as rendered:

C. M. Smith, "Rheumatic Fever."

J. H. Taylor, of Providence, "Indication and Contra-Indication for Currettage;" **J. F. Crawford**, Wheatcroft, "Intestinal Indigestion."

J. H. Taylor and **J. F. Crawford** being unavoidably detained at home, **C. M. Smith** read a very interesting paper which was appreciated by those present, as was shown by the general discussion.

Webster County has about thirty-five physicians in active practice, a fine body of intelligent men; but it matters not how good we are, we can be better, and nothing improves and broadens a doctor's mental vision like rubbing against his fellow. Therefore, let us hope that men like Winstead, Smith, Taylor, Cosby and others will do all they can to bring the Webster County society to the front for the year of 1915. There is no reason why they cannot, and every reason why they should. The material is there.

CYRUS GRAHAM, Councilor.

Whitley—The Whitley County Medical Society met in Williamsburg, in the offices of Ellison & Croley, on December 5, 1914. The following doctors were present: C. G. Ellison, President; L. B. Croley, C. A. Moss, E. S. Moss, A. A. Richardson, L. M. Scott, J. D. Adkins, B. F. Steely, L. O. Smith, J. W. Smith.

A motion was made and carried after consideration that it be recommended to the board of censors to accept J. G. Owsley as a member of the Whitley County Medical Society.

The following officers were elected for the ensuing year:

L. B. Croley, President; C. A. Moss, Secretary-Treasurer; A. A. Richardson, Vice President; S. S. Brown, Delegate; C. A. Moss, Alternae; J. D. Adkins, J. H. Parker, S. B. Snyder, Board of Censors.

Motion was made and carried that a committee consisting of C. G. Ellison, A. A. Richardson, and C. A. Moss be appointed to decide upon date and get up a program for next meeting.

There were talks on subjects of interest to medical profession by two or three of the doctors present.

There being no further business the meeting was adjourned.

C. A. MOSS, Secretary.

THE FORUM

THE SPECIALIST'S PRAYER.

To the Editor:

The Critic and Guide of November, 1914, under the above heading says: "May the Unseen Powers keep me from becoming strabismic, keep me from seeing or imagining the special disease of my specialty in every human being." To which we would add, may we be neither hypermetropic, myopic or astigmatic, but grant us emmetropic vision, but if we have not this may be have sense enough to have our error of refraction corrected by the lens of scientific facts and may we wear it constantly that we may be enabled to see people and conditions as they really and truly are, and if we have cerebral amaurosis or mental astigmatism, may we be persuaded, enticed or forced to make our living in some other way than practicing medicine.

J. A. STUCKY.

Dr. Leon K. Baldauf announces that he has established an office at 205 West Breckinridge street, Louisville, practice limited to diagnosis in conjunction with laboratory investigations and consultations.

Petty and Wallace's Sanitarium Company, of Memphis, Tennessee, who have been carrying an announcement in the *JOURNAL* for many years, have kindly sent us their recent prospectus. It certainly indicates that this remarkable Institution is growing into one of the largest places of its kind in the South and the *JOURNAL* congratulates its owners upon the excellence of this prospectus.

The modern diagnosis and treatment of disease cannot at the present time be made without the aid of the clinical laboratory and we wish to call the attention of the reader of this

JOURNAL to the Louisville Research Laboratory and the National Pathological Laboratory whose advertisements we carry and whose reliability and ethics are dependable. The physician may send to these laboratories any kind of specimen for diagnosis, and the result will help both the physician, and his patient. Many physicians are not acquainted with laboratory technique and by becoming acquainted with clinical laboratories of such high standing as these, will often times derive more benefit than if they would take a post-graduate course.

Dr. Woodson H. Taulbee, of Maysville, announces that he will hereafter confine his practice to surgery and consultation with physicians.

BOOK REVIEWS

A Treatise on Clinical Medicine—By William Thompson, M. D., LL. D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine, etc. Octavo volume of 667 pages. Philadelphia and London: W. B. Saunders Company, 1914. Cloth \$5.00. Half Morocco, \$6.50.

This is one of the latest and best contributions to modern medicine. Not only are the subjects of diagnosis, etiology and pathology fully discussed but the treatment of diseases is given its proper recognition and worth. A good many excellent practices on medicine are absolutely ruined because of the spirit of therapeutic nihilism pervading the work. It is of little value to the practicing doctor, to have a splendid knowledge of the disease and its course and allied facts concerning it, to find at the end of such a discussion of the disease that the measures for relief are inadequate, uncertain and meagre. In this book such a disappointment is not found. Subjects of vaccines and sera are thoroughly discussed and up-to-date. The author of this review can commend it to the doctors of Kentucky.

International Clinics—Volume 2, 1913, published by J. B. Lippincott Company, Philadelphia. Price \$2.00. Among the most important of the articles appearing in this splendid volume there is an article by Illman on Autitoxin; Serums and Vaccines and Biological Therapy by Hemenway; Isolation of Rooms and Residences for the Care of Patients Suffering with Contagious Diseases by A. J. Ochsner; use of Iodine in Abdominal Surgery, Gynecology and Obstetrics, by Bovee.

Volumes 1, 2, 3, Practical Medical Series on General Medicine—By Billings and Salisbury. Volume 3 on Eye, Ear, Nose and Throat by Wood, Andrews and Ballenger. Volume 2 on General

Surgery by Murphy. Tuberculosis and Heart Block and other cardiac infections are treated of in Volume 1. Examination of the eye, glaucoma, diseases of the internal ear and mastoid are among the articles in volume three. Operative technique and wound healing, the discussion of fractures, discussion of abdominal surgery with special reference to appendicitis, affections of the gall bladder and ducts in the spleen are among the most important articles in volume one.

Local and Regional Anesthesia, Including Analgesia.—By Carrol W. Allen, M. D., of Tulane University, New Orleans, with an introduction by Rudolph Matas, M. D., of Tulane University, New Orleans. Octavo of 625 pages with 255 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

At first thought it would seem impracticable and well-nigh impossible to write a volume of 600 pages on the subject of local anesthesia but a perusal of its pages show not only that it is possible but practical and advisable. After a discussion of the history and philosophy of pain and the principles of osmosis and diffusion, a consideration of the various forms of anesthesia is begun. Pressure, cold and water anesthesia, anesthesia produced by various drugs and principles of technique are then considered. Indications, contra-indications and shock. Anoci-association are each given a chapter. The various regions of the body are then considered with special technique for producing special local anesthesia. The chapter on spinal anesthesia and epidural injections are of special value. The book concludes with a chapter on organs of special sense and dental anesthesia.

Episcopal Hospital Reports—Are published by Wm. J. Dorman, Philadelphia. This volume of four hundred pages reviews the work of this hospital and is of considerable value from a statistical standpoint and contains a good deal of didactic material.

Ten Sex Talks to Boys—Published by J. B. Lippincott Company, Philadelphia. We make a similar objection to this book being placed in the hands of young boys as was made to the Sex Talks to Girls, for distribution among young girls, namely: That this book should be read by the fathers of boys and its contents judiciously taught to them by the parent. The material in the book is good, well written and, of course, contains the kind of information that every boy should know when presented through the proper channels.

The Tonsils—By Harry A. Barnes, instructor in Laryngology, Harvard Medical School and published by C. V. Mosby Publishing Company, St. Louis. This book of 160 pages deals with the gen-

eral nature of lymphoid tissue, the development of the tonsil, the anatomy, histology, function, pathology, bacteriology, diseases, neoplasms, surgery of the tonsils, a discussion of adenoids and the complication and sequelae of operations on the tonsils. It is a good book. Price \$3.00.

Medical Jurisprudence.—Price \$3.00. Whitten by Elmer D. Brothers, member of the Chicago Bar, lecturer on Jurisprudence, University of Illinois, Medical and Dental Department, published by C. V. Mosby Publishing Company.

This book deals in a general way, for the information of medical men, with courts and procedure, evidence, expert witness, hearsay evidence, privileged communications, license, employment and compensation, civil and criminal malpractice, insanity, blood stains, status of limitations and miscellaneous. This book affords a ready reference for the various medico-legal subjects that arises in the practice of medicine.

A Text-Book of Military Hygiene and Sanitation.—By Frank R. Keefer, M. D., Lieutenant-Colonel, Medical Corps, United States Military Academy, West Point. 12mo of 305 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$1.50 net.

This book is of special interest in view of the great European war and treats, in a practical way, with clothing, equipment, water supply, sewerage disposal, food, venereal disease and many other problems of military life.

Diseases of the Bones and Joints.—By Leonard W. Ely, Associate Professor of Surgery, Leland Stanford Junior University, published by the Surgery Publishing Company, 92 Williams Street, New York.

This book, well illustrated, is a practical treatise of 200 pages of this very important subject and any one especially interested will not make a mistake in adding it to his library.

Abdominal Operations.—By Sir Berkeley Woy-nihan, M. S. (London) F. R. C. S., Leeds, England. Third edition, entirely reset and enlarged. Two octavo volumes totaling 980 pages, with 371 illustrations, 5 in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$10.00 net; Half Morocco, \$13.00 net.

These volumes constitute a classic in abdominal surgery. This third edition testifies to the popularity of Moynihan's work. The illustrations alone constitute a real study in abdominal work and certainly makes the technique as described in the text most plain. The volumes do not include gynecological operations nor is the surgery of kidney and the bladder included. These volumes are thoroughly revised and up-to-date and can be accepted with assurance of safety as a guide for abdominal operative work.

Guiding Principles in Surgical Practice.—By Frederick-Emil Neef, B. S. M. L. M. D., published by the Surgery Publishing Company, 82 Williams Street, New York.

This is a book of 162 pages and is a discussion of the underlying principles for doing surgical work and includes preparation of the patient, dressings, sterilization of instruments, care of the surgeon's hands, suture material, wound healing, anesthesia, incision and course of the operation, after treatment and the treatment of unclean wounds.

A Handbook of Psychology and Mental Diseases.—For use in training schools, for attendants and nurses in medical classes and as a ready reference for the practitioner, By C. B. Burr. Published by F. A. Davis Company, Philadelphia.

This is the fourth edition of this book and is a practical discussion of the principles of psychology, processes of the mind and the various forms of insanity.

International Clinics.—Volume 3, 1913. Published by J. B. Lippincott & Company, Philadelphia.

Vaccine treatment of typhoid by Goodman, the treatment of diphtheria by Steinhardt, treatment of diabetes by Robin; Treatment of an epidemic of pertussis by series of vaccines by Hess are some of the important articles in this volume. Treatment of nervous affections by electricity are of value.

Volumes 4, 5, and 6, General Practical Medicine Series.—By the Year Book Publishers, Chicago.

Volume 4 is devoted to gynecology by Dudley-Stowe. Volume 5 to pediatrics and orthopedic surgery by Apt and Ridlon. Volume 6 to general medicine by Billings and Salisbury. They are up to the usual average of interest and value as other books of this well known series.

Collected Papers.—By the Staff of St. Mary's Hospital—Mayo Clinic—1913. W. B. Saunders Company, publishers.

It would be difficult to give one an idea of the scope of work outlined in this book. Any one familiar with the variety and extent of the work in the Mayo Clinic will understand this statement. Articles appearing by Beekman, Sanford, Eusterman, Wm. J. Mayo, Chas. H. Mayo, and others upon timely and interesting subjects. In the absence of a visit to this famous clinic a study of this volume is recommended.

Worry and Nervousness.—By Wm. S. Sadler, published by A. C. McClurg & Company, Chicago. Price, \$1.50.

There are discussed in this book heredity and environment, causes of worry, suffering, neurasthenia, modern psycho-therapy, educational therapeutics, stimulants and narcotics and the various cures.

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Postoperative Leukocyte Count with Reference to Appendicitis.—After catarrhal appendicitis or mild infections, with removal of the source, White says, we may expect an initial leukocytosis, followed by a gradual and permanent decline in the absence of complications. After a mild infection and the cause removed, a secondary infection of a small area or a transient toemia is noted by a moderate leukocytosis, usually present after the first week of the illness. Secondary infection of the peritoneum with good resistance shows an early and high increase of the leukocytes and will continue for an extended period.

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ORIGINAL ARTICLES

EMPHYSEMA.*

By E. M. HARRISON, Forkridge.

Emphysema is defined as the presence of air or gases in the tissues of the body and is generally classified in two forms, skin and pulmonary; but little stress is made in the description of the skin form of emphysema on account of it so seldom assuming any alarming nature; emphysema of the skin is a condition, consisting of air or gases in the subcutaneous tissue giving the appearance of edema without its characteristic pitting, instead yielding to very light pressure with fine crepitation and crackling to the examining finger; amount of swelling may vary from the slightest to the most extreme degree especially in the neck and thorax or other parts of the body where the cellular tissue is very plentiful.

Etiology of subcutaneous emphysema is ordinarily traumatic either from a wound from without or the forcible rupture of air or gas containing organ within the body and may be caused by the development of gas producing organisms within the tissues themselves.

Subcutaneous emphysema of a traumatic nature is always characteristic or synonymous in location with the producing injury as the presence of air in the subcutaneous tissues of the neck and face are caused by injuries involving the mouth or oesophagus or the disease by the perforation through ulceration of cancer the air finding its way to the subcutaneous tissues by means of the mediastinum; in the lower part of the neck and thorax the

air emanates from injury of the larynx and trachea or from perforation of cavities in an adherent lung into the chest walls or by wounds into the lung tissue itself; in the abdomen we find the causative factor to frequently be the perforation of the intestine after adhesive inflammation has taken place; starting as a focus from any of these points the emphysema may spread over the entire body depending upon the force of the invading air or gas and the resistance met with.

Ordinarily the form of subcutaneous emphysema met with is that caused by injury to the lung or air passages either from within as by fractured rib or from without by knife or gunshot wounds; seldom is it that emphysema of the skin exists to any degree without some direct connection with these air passages though it sometimes happens that the suction action of the external skin wound draws in the air and so produces the emphysema.

Generally traumatic emphysema of the skin requires no treatment the tissues rapidly absorbing the air; though in extreme cases too much pressure being caused by the large accumulation of air in the tissues it may be necessary to make multiple incisions and thus afford an egress for the accumulation and in other cases the application of pressure will act as a preventive. In this as well as all other conditions it is always necessary to pay attention to the causative factor and proper remedial measures applied.

Pulmonary emphysema is of two classes, the vesicular and interlobular type. In the interlobular form there is the presence of air in the interstitial alveolar tissues and in the vesicular type there is an abnormal dilatation of the alveoli themselves.

*Read before the Bell County Medical Society.

The interlobular form is caused by the rupture of the air cells, permitting the air to escape into the tissues surrounding them; the etiology of the interlobular type consists of injury to the lung as broken ribs or perforating gunshot or knife wounds, rupture of the air cells may be caused by anything producing compression as bringing into violent use the powerful muscles of the chest walls along with the action of the diaphragm in coughing, the powerful contractions during childbirth, convulsion and even straining at stool.

In interlobular emphysema the diagnosis of such a condition is often very difficult and usually can not be made unless the air penetrates along the trachea and up the neck causing subcutaneous emphysema or the air sack rupturing into the pleura sets up suddenly a pneumothorax; there is ordinarily no characteristic sounds on auscultation though occasionally there is present a rumbling friction sound that may be heard only in this trouble.

The vesicular type of emphysema is a bugbear to many of us physicians and when met with in its hypertrophic form taxes all of our energies to even make life bearable to the patient with any degree of comfort and is one of our most dreaded diseases on account of the inability to cure it while on the other hand compensating emphysema, another of the types of vesicular emphysema is a God-given relief to sufferers in other forms of lung affliction and without it many a poor mortal afflicted with dreaded tuberculosis would the sooner shuffle off this mortal coil and the sooner pay the debt that all mankind has to settle with his God.

Vesicular emphysema consists of an enlargement or dilatation of the alveoli of the lung and is classified in the following forms: Compensating, hypertrophic and atrophic.

Compensating emphysema is merely a vicarious increase in the volume of certain of the air cells of the lung to take the place and do the added work of others destroyed or incapacitated by disease such as tuberculosis and lobular pneumonia.

There are no distinctive symptoms of this condition and rather than being classed as a form of disease it should be noted as one of nature's efforts to cure disease, instead of any effort being made to prevent the occurrence of compensating emphysema due thanks should be given to mother nature and while in many cases it is quite impossible to definitely determine from any physical sign that such a condition is present, we may assume, for the patient's good that it has taken place as nature, the greatest of all doctors, seldom fails to provide to her utmost effort.

Hypertrophic emphysema is the enlargement of the air cells of the lung pathologically in contradistinction to compensating emphy-

sema which is not considered detrimental, rather as beneficial, in the conditions in which it is found.

Etiology of hypertrophic emphysema dates back in many cases to a congenital weakness of the lung tissues themselves with following faulty development of the elastic fibres of the lung during childhood, followed in the later years of life with the natural loss of the elasticity of youth and added to these there is most always a primary disease, of long duration, to which this malady is secondary—the winter cough of the aged, chronic bronchitis, whooping cough in the young, and as frequent as any asthma; various avocations of life that increase intrapulmonary pressure as blowing wind instruments, glass blowing, lifting heavy weights and working where there is constantly breathing of heavy dust and most of them the one work of life which most of us seem to perform with the greatest eagerness and to which the most assiduous attention is paid, without complaint as to the number of hours worked, our life work of trying to drink all the whiskey, both good and bad, there is in the world, is quite often the cause of this intractable disease.

The visual pathology of this disease consists of an enlarged barrel-shaped chest enclosing very much enlarged and non-collapsible lungs, light in color due to an absence of the normal pigment, and to distribution of what is there over such an enlarged area, the alveoli are very much enlarged, the interlobular septa diminished by atrophy following pressure along with obliteration of the capillaries.

In direct distinction with the other forms of emphysema, where there are possibly no characteristic symptoms, the enlarged barrel-shaped chest is always characteristic of hypertrophic emphysema; the patient's chest is in a constant act of inspiration with clavicles highly elevated, sternum protruding and back arched with the natural effect of depressing the diaphragm and abdominal contents and pushing the heart backwards and by the interruption of its circulation, set up mitral lesions with its following dropsical swellings.

For the clinical history we will have almost always a gradual and insidious onset, dating in many cases from childhood, and added gradually to that of some other disease, with generally the first complaint being that of shortness of breath and temporary cyanosis, noticed after exercise or the eating of a hearty meal; later these symptoms become more and more constant until they exist without the exciting stimulus, the breathing gradually becomes wheezy and labored, especially in expiration, and at times actually interferes with the power of speech; the temperature is reduced to below normal and the pulse weakened, but not rapid.

The physical signs are most distinctive of this disease and there should be no trouble in diagnosing a well-developed type.

By inspection we see the barrel-shaped chest, expansion greatly reduced, retraction of the abdomen on inspiration and the greatly prolonged expiratory effort, loss of the apex beat of the heart and distended neck veins; by auscultation we discover all forms of rales with the characteristic greatly prolonged expiratory sound, and the short, weak inspiratory effort hardly perceptible.

Prognosis of hypertrophic emphysema is always bad, there is no hope of a cure, but while this is so it sometimes runs for quite a number of years, except in the few cases that come on suddenly during the course of whooping cough in children, these are frequently cured.

The treatment of a case of hypertrophic emphysema will tax the energies and resources of any physician and, while we give a prognosis that is bad, as for recovery, but with prospects of quite a long suffering period, it becomes necessary that we mitigate, so far as in our power, the great distress of our patient; in doing this the difficulties are almost insurmountable and, as I have already mentioned, we almost always have to deal with a disease of long duration that has gradually and insidiously crept upon us under the guise of a primary illness aided and abetted by congenital weakness and inherited tendencies; to in the least ameliorate his suffering it is necessary that the sufferer who has instinctively realized that he has a deficient respiratory apparatus must refrain from all acute exercises, must not overload the stomach and in fact, must avoid anything that would tend to throw extra work upon the heart and lungs: we can assist him by prescribing the use of physical exercises that tend to control and develop the respiratory muscles; in this way the pneumatic cabinet may be used allowing the atmospheric pressure to be compressed to as much as one and one-half atmospheres, and also the expedient of expiring into rarefied air. Inhalations of oxygen are sometimes beneficial as is also the method of forcibly compressing the chest on expiration, aiding in expelling the air, is worthy of trial; we must absolutely prohibit the use of alcohol in any form.

By therapeutic measures to the primary diseases and the use of tonics as, iron, cod liver oil with iodide of potash as a solvent, much benefit can be derived; by strict and close attention attacks of dyspnea, cyanosis and threatened failure of the heart by engorgement, relief can and must be given by venesection when digitalis, strophanthus and the other heart stimulants have failed.

Generally speaking, symptomatic medication

applied in scientific way, is our hope of ameliorating the very manifest suffering and distress that is always present in this form of disease, and frequently by strict methods of living on the part of the patient with rigid rules laid down by the physician, life is made more tolerable and existence prolonged.

On going over my paper I notice that I made mention of atrophic emphysema as a form of vesicular type but failed to make any further comments upon it; on account of its infrequency and its very manifest secondary importance to the hypertrophic form, but little stress is made upon it by most authors, though a brief description is merited; atrophic emphysema in contra-distinction with the hypertrophic type, which always shows an increase in the size of the chest and lungs, presents to inspection diminished chest and lungs with the intercostal spaces very much lessened and in the lung tissue itself is a state of senile atrophy with the air vesicles very greatly enlarged; atrophic emphysema is almost always the termination of a long continued attack of chronic bronchitis in the aged; the sufferers most always appear to have been dried and withered by the hot suns of a great desert; nothing in the form of treatment is of any efficacy as is the case of the preceding type and symptomatic medication is our stand-by to make life worth the living and that with but little success."

ANTERIOR POLIOMYELITIS.*

By E. M. HOWARD, Middlesboro.

Infantile paralysis, acute atrophic paralysis is a disease affecting the anterior horns of the spinal cord, producing motor symptoms of various degrees—from a slight interference with motor ability to a complete loss of voluntary motion in one or more groups of muscles. It occurs most frequently in children from one to five years of age, hence the name "Infantile Paralysis." It is seen in both acute and chronic forms, but is here considered in the acute epidemic form. It has a tendency to spontaneous recovery, except in certain groups of muscles there is usually permanent paralysis as a rule. This disease in the past six years has become very prevalent over a large part of the United States.

ETIOLOGY.

For years past the profession had noticed that the disease was most common in Summer months—July and August principally—and they also noticed that boys were more often affected than girls, yet was at a loss as to the true cause. Often traumatism was given as a cause, along with the other infectious dis-

*Read before the Pell County Medical Society.

eases which were thought to play some part in it, such as lagrippe, tuberculosis, etc., but now I believe they are not considered causative factors. The true cause now is thought to be infection with a specific germ, which germ was isolated and described by Dr. Flexner in March, 1912. It is stated in the *American Journal of Clinical Medicine* of June, 1913, that Rosenau, of Hartford, was able to demonstrate that the disease as transmitted by the bite of the stable fly, the stomoxys calcitrans.

In the *Mother's Magazine*, February Number of this year, there is an article written by Dr. F. J. Stewart, from which I here quote the following: "I believe infantile paralysis will be found to have its primary origin in the condition of the blood of the parents who gave the little sufferer to the world—the sins of the past generation visited upon the innocent of the present." I think Dr. Stewart infers the inheritance of a generally weakened system and low stage of vitality from the following paragraph of the same article: "Regarding many features of the disease I am as much in the dark as my fellow practitioners, but such experience as I have had with it has led me to the definite conclusion that while there is much doubt as to how to cure the disease, its prevention in your children lies in blood-building, hardy exercise, sanitary habits, and complete isolation from any child coming down with an attack.

Dr. Jacolyn Manning, of the American Medical Association, says: "Infantile Paralysis is an inflammation of the nerve cells in the gray matter of the spinal cord, which begins suddenly, is followed by a paralysis of the muscles controlled by the nerve cells attacked, and may be transmitted to any member of a community it has once invaded. The inflammation which destroys the nerve cells in the spinal cord is caused by a germ coming from another victim of the same disease. This germ is as easily acquired as the germ of diphtheria, and more readily than the bacillus of typhoid fever."

Further, in the *Journal of the American Medical Association*, January 3, 1914, there is an article dealing with experimental studies in poliomyelitis by three prominent physicians of New York, and from which we get the following: "Robert A., aged 5, reported poliomyelitis, had his nose and throat washed with a normal saline solution, the filtered washings were injected intraperitoneally into a monkey on January 25th. February 14th the monkey was sick; February 17th, partially paralyzed in hind legs; February 18th, drags right foot; February 18th, monkey chloroformed. February 24th emulsion from cerebrum, medulla and spinal cord of monkey made and filtrate injected intraperitoneally

into monkey 2; March 6th, monkey paralyzed in right hind paw; temperature 104.5 F; March 8th, temperature 103 F. After this the monkey slowly improved and partially regained the use of its paw."

A summary of the same article last above referred to states: 1. Negative results from feces of patient with typical poliomyelitis. 2. Positive result (paralysis and microscopic findings) from washings of nose and throat of patient with abortive case seventeen days after onset. 3. Positive result (paralysis and microscopic findings) of second monkey injected with brain and cord of monkey infected with washings.

With the opinions of so many investigators coupled with the number of epidemics in this country in the past few years I think we will about all agree that the cause is a specific organism, which is transmissible from one individual to another.

PATHOLOGY.

An inflammatory condition of the anterior portion of the spinal cord; usually affect only one horn and the affected side atrophies and upon examination is found to be shrunken, the general changes being of a sclerotic nature. The lumbar region is most frequently involved, but may be more than one focus. The paralysis occurring from this disease, may effect either one, two or all the extremities of the body, and sometimes nearly all the muscles of the body are affected. It is most common in the lower extremities. May be partial or complete.

SYMPTOMS.

In my experience the first symptoms we encounter from this disease arises from the gastro-intestinal tract, beginning with nausea and vomiting and followed by an elevation of temperature to 101 F. to 103 F., followed later with pains in the muscles of the limbs and back; the paralysis coming on only after these symptoms have lasted for a number of days.

Authors tell us that in a smaller number of cases more severe constitutional symptoms are seen at the beginning of the disease such as delirium, excessive temperature and great prostration, but fortunately this has not been the rule in my cases. Constipation is a common symptom, and curvature of the spine is marked in some cases, with head greatly retracted. The paralysis is sometimes the first thing complained of, but this is not the rule and I believe follows other symptoms which have been overlooked because they were so mild. It usually develops gradually, and the use of the part is likewise gradually restored, except the muscles that begin a process of atrophy; such groups that are affected in that way undergo a slow change which covers a consid-

able period of time. Another symptom that I have noticed is marked coldness of the extremities, particularly the feet. Later symptoms are after two or three months considerable atrophy of one or both limbs affected, but usually only one. The most encouraging part is that this atrophy sometimes does not occur at all to any noticeable degree.

DIAGNOSIS.

I think with the symptoms before us we must all confess it is hard indeed to recognize this disease at a comparatively early stage. The early symptoms are common to many other diseases in children, and it is usually several days before we can make a positive diagnosis. The age of the child, season of the year, existence of other cases in the community all play some part in the diagnosis, the latter, of course, puts us on our guard.

Under the head of "Mistaken Diagnosis," on page 337 of the *Journal of the American Medical Association*, January 24th, 1914, we learn from Dr. Zappert that he treated one child for lagrippe, which after the fever had subsided the legs began to drag and it was discovered that poliomyelitis had existed. Also he warns further that poliomyelitis may be accompanied, and sometimes is, by an eruption with desquamation, which would suggest scarlet fever.

PROGNOSIS.

As concerning life will say that the prognosis is good; as to deformity it is bad; because the greater part of the cases will live, and will be deformed as a result of the muscular atrophy. Complete recovery, without deformity, occurs but is rare.

Holt says: The best indication of improvement is the return of faradic contractility; if this is completely lost for six months recovery is doubtful; if faradic contractility is lost for a muscle for one year, improvement is not to be expected. If faradic contractility has never been lost great and early improvement may confidently be predicted.

TREATMENT.

On this part of the subject I fear we are all like Dr. Ellis, of Cerro Gordo, Illinois. I noticed in the *Medical Council*, of April, 1913, the following:

A REQUEST.

"Editor *Medical Council*:

"I would like the readers of the *Medical Council* who have had experience with poliomyelitis to give their treatment.

(Signed) "JOSHUA ELLIS, M. D."

My treatment has been a thorough cleansing, of the gastro-intestinal tract, followed with hot baths to induce free perspiration.

Keep patient quiet in bed at all times. Also believe in counter-irritation, and for this purpose I use mustard locally to the lumbar region. Have never tried the dry cupping or Pacquelin cautery as is recommended by some authors. Some recommend ice bag to the spine and it may be of benefit, but I have not tried it. Urotropin and strychnine are the two principal drugs I have used—urotropin straight through the attack and strychnine as indicated. Believe they will serve as well as any obtainable. Have doubts as to the good done by drugs, and for that reason rely upon strychnine because I think it is a good tonic as well as stimulant, and urotropin because if any antiseptic can get to the spot, or any part of the way, I think it will. To support my belief in urotropin will say that when my 2-year-old daughter had this trouble two years ago I consulted Dr. J. B. Marvin, of Louisville, (now deceased), and also Dr. A. Seibert, of New York City, both specialists along this line, and Dr. Wilson of Pineville, and they all very promptly replied to give urotropin and each specified the same dose—one grain every four hours (grs. j. q. 4 h.). Dr. Wilson. This supported also that urotropin taken into the system liberates formaldehyde, however, in the *Journal of the American Medical Association*, January 3rd of this year, page 43, we get proof that formaldehyde is not liberated from ingested urotropin, except in acid fluids, therefore, it would not be expected to have any direct action in the fluid of the spinal cord if this be true. Flexner, in the *Journal A. M. A.*, January 24, 1914, says: "Urotropin is useful only in this disease as an immunizing agent, and that it has no effect upon the disease after the patient is inoculated." That therefore, brings us to the minute on the urotropin treatment.

Dr. Southwick in the *American Journal of Clinical Medicine*, June 1913, recommends strychnine. He also recommends calcium sulphide and ergotine, together with a blister six to eight inches long by one inch wide (6 in.x1 in.) over the spine. Dr. Holt also recommends the use of ergot, theoretically but says he doubts if it does any good.

Summing up treatment I would recommend the following: Early recognition, prophylaxis to prevent spread, disinfection of excretions, make patient comfortable as possible. Have found enemata to be of great service when constipated, and gives comfort.

DIET.

Milk, soup, beef juice, egg albumen, etc., throughout acute attack. Lumbar puncture is recommended when pressure is very great.

but I think we should be very cautious about this.

Mechanical treatment does some service by aiding us in correcting deformities.

Operative treatment is recommended by the orthopedic surgeons, and is of great service in correcting fixed deformities, improving muscular functions, etc.

Case I. Margaret H., aged 2 years, 1 month, ate too many bananas on July 7th, complained of being sick July 8th and upon examination I found her temperature to be 102 F. Had her mother give an enema with good result; on July 9 temperature still 102 F., I gave calomel and sodium bicarb. followed by an enema of hot water with good copious actions. The calomel and soda was followed also by castor oil with gtts. ij of turpentine; July 10th temperature 102 F., enema, some weakness of legs noticed; July 11 lower temperature, constipation, increased leg symptoms; July 12th temperature and leg symptoms increased constipation, gave castoria for bowels followed by free bowel actions; July 13. increased leg symptoms, with some weakness of arms, restless, constipation; July 14, leg symptoms same, pain on motion, constipation; stiffness of back; July 15 leg symptoms same, stiffness of back increased, pain increased, but cheerful except when moved, sleep considerably broken; July 16, all symptoms about the same as 15th; July 17 better of all symptoms except legs and constipation, very cheerful and wanted to sit erect, slept well after enemata at bedtime. Strychnine was begun on the 14th and applications of mustard to back on 15th; July 17th wanted to eat; July 18 better symptoms nearly all gone, except inability to walk; bowels moved spontaneously, passed a little blood, appetite better. Mental symptoms were negative throughout the entire attack.

As this case was my own daughter I had opportunity to be with her almost continuously, and after she began to get better she learned to crawl as she did when she was a baby; then learned to pull up to chairs and finally after a month was able to walk again, but with an effort, and would fall so often that I hardly knew whether it was best to let her attempt to walk, but decided the exercise would outweigh the shock she got from the falls so let her walk at her pleasure. She is now, after 2 years and 7 months, strong as the average child, but with a very slight limp. There is no appreciable difference in the size of her limbs, but there is a slight atrophy, enough to be discovered by a close observer.

CORNEAL ULCER, ITS COMPLICATION AND SEQUELAE.*

By B. A. COCKRELL, Pineville.

The cornea is the projecting transparent part of the external tunic of the eye ball and forms the anterior sixth of the globe. It is not circular, being a little broader transversely than vertically because of the overlapping of the sclerotic above and below. It projects forward like a watch glass does from its base. This degree of curvature varies in different individuals and at different periods of life, it becoming more and more attended as life advances.

The cornea is dense and of a uniform thickness throughout. The posterior surface is perfectly circular and exceeds the anterior surface a little in extent from the latter being overlapped by the sclerotic.

The cornea consists of five layers, they being a thick central fibrous structure, an anterior and posterior elastic lamina, the anterior lamina being covered by the conjunctiva and the posterior by the membrane of Descemet.

The central coat or cornea proper is fibrous tough, unyielding and perfectly transparent. It is composed of anastomosing fusiform cells, about sixty in number, which are arranged in superimposed flattened laminae, all of which have the same direction. A change in the relative position of the component parts of this tissue, either by pressure or by an increase of its natural tension immediately causes an opaque milky appearance.

The function of the laminae seems to be to preserve the correct curvature of the flaccid cornea proper.

The cornea is a non-vascular structure, the capillary vessels terminating in loops at its circumference.

Lymphatic vessels have never been demonstrated in it.

The nerves are numerous, there being twenty or thirty. They are derived from the ciliary nerves and enter the laminated substances of the cornea.

Because of its prominence, it being the most exposed portion of the eye ball, the cornea is the most frequent seat of injury and infection of the whole globe, and because of its non-vascular formation it has a special adaptability for ulcers.

An ulcer once started in the cornea can be stopped only by a complete obliteration of that portion affected and by the proper aseptic steps to insure no further infection.

Corneal ulcers are important because of the danger of there being a rupture of its substance, should the ulcer become deep-seated

*Read before the Bell County Medical Society.

enough; because of iris complications, opacities and irregularities of the corneal curvature which may impair or cause the loss of vision.

There are two distinct varieties of corneal ulcers, phlyctenular and traumatic. The phlyctenular ulcers are those of vesicular origin and are chiefly caused by keratitis and conjunctivitis. Traumatic ulcers are caused by foreign bodies in the eye, by a blow of any kind or by burns.

Diagnosis is made by the history of the case, the location of a foreign body, the condition of the other portions of the eye, by microscopical examination of the exudate, by general systemic conditions and by the character and formation of the ulcer. The history plays an important part in the diagnosis of all of these ulcers except those due to tuberculosis, syphilis and similar systemic conditions.

Traumatic ulcers always give a history of a blow, a burn or of a foreign body in the eye. They respond more readily to treatment, especially when promptly attended to.

Phlyctenular ulcers are as a rule a spreading of an infection from surrounding tissues onto the cornea, they respond to treatment more slowly and often become indolent to a very marked degree. These ulcers may be specific or tubercular, they may be due to pneumococci, gonococci, staphylococci, streptococci and to numerous other micro-organisms.

Another form of corneal ulcer not so commonly seen is the dendritic ulcer, which is an ulceration of the nerve ending or endings in the corneal tissues.

The treatment of this ulcer is scraping and touching with silver nitrate or formaldehyde, 1-60.

General systemic treatment is important in all of these conditions, plain diet, out-door exercise and plenty of fresh air are essential.

If the ulcer be tubercular or specific the treatment of those primary conditions naturally should follow.

The treatment for all infected ulcers is simple and is usually satisfactory. It consists in scraping or curetting. The tissues surrounding the ulcer should be scraped towards the ulcer so as to empty the interlamellar spaces of their contents. All softened tissues should be removed. The ulcer then should be watched and upon the slightest evidence of further extension of the infective process thoroughly scraped again.

For small ulcers, after carefully cleansing the surface, one of the best means of checking further extension is by the application of nitric acid, either pure or diluted with pure water, half and half. It is applied in this way, take a wooden toothpick or match, dip

it into the acid, and then hold in the air until all the acid is absorbed into the wood, so that the surface no longer looks shiny, then press the wood against the surface to be cauterized till it turns white. This can be repeated in a day or two if necessary.

Iodine has an especial adaptability to all ulcers of the indolent type. It lessens rather than increases scar tissue. For the latter it seems to possess a peculiar affinity and to exert a remarkable influence.

The judicious use of iodine cannot be too warmly advocated; and while in some instances two and even three applications are necessary to effect a cure, the majority readily yield after once using it. Use the tr. of iodine in all cases.

The eye should be cocaineized to complete anesthesia, then insert an eye speculum, scrape the ulcer with a spud or similar instrument, dry the ulcer thoroughly and with a few fibers of cotton around a toothpick, small probe or applicator, which has been immersed in the tincture of iodine, apply thoroughly to the ulcer. Be careful, however, to dry off the excess and to allow none of the drug to come into contact with the healthy parts of the eye. Then bathe the eye with sterile water or boric acid solution and treat as a traumatic ulcer.

Another treatment is a watery solution of iodine, 1 grain (0.065 Gm.); sodium iodide, 3 grains, (0.2 Gm.); and water one ounce (30 Gm.). Three drops of this solution in the eye three or four times a day without other treatment has been very successful in the hands of Meirerhof. This application is not very painful, the pain lasting only ten or fifteen minutes. There may be some congestion of the conjunctiva but this is only temporary. This treatment may be used for several weeks with those very indolent cases of chronic origin.

Another treatment equally as efficient as scraping, though a little more alarming to the patient, is actual cautery. This may be done with a galvano-cautery tip or steel knitting needle or steel probe heated white hot in an alcohol flame, then quickly applied to all the ulcerated area. The eye then should remain undisturbed for a day or so except to be kept clean.

Fully 95 per cent. of the corneal ulcers are due to the pneumococcus. These may be treated with anti-pneumococcus serum which will promptly cure the majority of such cases. The local treatment should be used in all cases in conjunction with other treatments, however, as by that method you may limit the area of ulceration till systemic treatment has begun to take effect.

The anti-pneumococcus serum valuable also in the treatment of serpentine ulcers, but

should be used in conjunction with the actual cautery.

In all cases of ulcer due to keratitis and similar conditions the pupil should be kept well dilated with atropine to prevent such complications as posterior synechia and all iris troubles.

Another very satisfactory treatment for corneal ulcers of slight duration is the application of a 1-1000 solution of mercuric bichloride, first scraping and allowing the ulcer to dry. I have used this treatment for ulcers of slight duration, traumatic ulcers and following the removal of foreign bodies, and the iodine for the slower and more indolent ulcers and have found both to be very satisfactory, the iodine giving especially gratifying results.

Burns, either by steam, hot metal, or by acids or caustics may cause an ulcer that will leave a milky film over the cornea. This will either come away or can be removed, leaving the eye uninjured.

In case of burns by steam or hot metal the treatment is to keep the eye closed under a light bandage and to bathe twice a day with boric solution. Injury by quicklime demands very prompt action, remove all the caustic as quickly as possible and fill the eye with olive oil.

Other caustic alkalies should be neutralized by very weak acids such as vinegar or water, then wash copiously with boric solution.

Neutralize acids with lime water or solution of sodium or potassium bicarbonate or soapsuds. By far the best of these is sodium bicarbonate.

Another important thing in the treatment of all infectious ulcers is the yellow oxide of mercury ointment twice a day, a piece about the size of a grain of rice placed under the lid which should be rubbed well with the fingers. This ointment is a germicide as well as being soothing, and to my way of thinking should be used in all cases following scraping and curetting as it helps to prevent a spread of the infection.

The most important thing of all in the handling of corneal ulcers is their early treatment. Much depends upon preventing them from becoming deep-seated because of the serious complications that may follow, such as posterior synechia, opacities, the destruction of the corneal curvature and the rupture of the cornea itself, any of which will cause the partial or complete destruction of vision.

The main fight is against these complications or sequelae, the avoidance of which is the main factor in securing a useful eye.

Owing to the fact that the cornea has no blood vessels it is specially adapted to the propagation of ulcers, for the same reason

ulcers here are not easily treated and the only satisfactory method of obtaining results is by the complete obliteration of all the diseased tissues, either by scraping, curetting or by the application of caustics. Practically all corneal ulcers are very painful because of the large nerve supply to these tissues.

Cocain should be used as sparingly as possible owing to its irritating propensities. Its use is necessary sometimes but should be very guarded. In ulcers here it has no medicinal qualities, it is to be used merely as an anesthetic.

GONORRHOEA AND ITS TREATMENT*

By T. T. GIBSON, Middlesboro.

Gonorrhea is a contagious, specific inflammation of the mucous membrane, the genitourinary tract being the primary seat of infection in a large per cent of the cases.

ETIOLOGY.

It always develops from the presence of the specific microbe, termed the gonococcus which can be found in gonorrheal infection. This gonococci, or diplococci resemble the two seeds of a coffee bean, flat or slightly concave on one side and rounded on the other with their flat surfaces apposed. In their process of multiplication each half of the diplococcus divides at right angles to the fissure between the two cultures. Kept in acid media they retain their virulence for many weeks, while those kept in alkaline media become inert in from two to four days. Their position is exceedingly characteristic. They are always found heaped in the protoplasm of the pus and epithelial cells. Sometimes the cells appear entirely filled with these organisms. Other characteristic points are, they are diplococci, they appear in heaps and are very numerous in acute cases. They are readily colored by aniline dyes and decolorized by Gram's solution and alcohol. They form characteristic pure cultures on suitable acid media and are non-pathogenic to lower animals.

LOCATION OF THE INFECTION.

If from the anterior urethra the discharge appears at the meatus, either spontaneously or after stripping; if from the posterior urethra it is noted just before urination or during the passage of hard feces; if from the prostate and seminal vessels it appears after milking these glands; if from the bladder it appears at the end of micturition or it may be seen at all times indicating a general infection of all these locations.

PATHOLOGY.

The gonococci having been deposited on the surface of the mucous membrane, either by im-

*Read before the Bell County Medical Society.

mediate or mediate contagion, multiply rapidly and penetrate the epithelium, reaching its deepest layers it stops abruptly at the sub-epithelial connective tissue.

INCUBATION.

Incubation may vary from a few hours to three or four weeks, but usually from three to five days from the time of exposure to the development of the first symptoms, this time being governed by the strength of microbic invasion, the seat of entrance and vital resistance of the mucous membrane.

TREATMENT.

Treatment of gonorrhea should be divided under three heads, 1st, prophylactic; second, abortive; and third, systematic.

1. *Prophylactic*; Under this head we have the best and we might say the only treatment with which to stamp out gonorrhea. There appear to be two functions in this life that overshadow all the others, viz: to sustain life and to reproduce it. Both problems should be looked after by our profession. The first has been industriously and carefully performed. Problems relating to the second have to a very great extent been cast to the four winds to be gathered by so-called "world renown specialists," who when simmered down as a rule show no special learning in any direction, except that of fleecing the unfortunate of his hard earned savings in lump sums giving him as a rule nothing in return but buncombe and bad taste of the profession at large. I believe that in gonorrhea and venereal diseases there is too little attention paid to every-day conditions. In past history water has killed more soldiers than bullets have killed. So has gonorrhea and other venereal diseases in reality caused more real damage than is ordinarily supposed. About nine internes out of ten leaving the hospitals and going out to relieve the physical sufferings of the race have their minds working overtime on how to do abdominal surgery as well as the next fellow and forgetting it seems, that a large number of these same abdominal operations are caused from gonorrhea and that a large per cent. of these could be prevented by educating the public to the danger of this terrible disease and how to prevent it. "Man that is born of woman is but a few days and full of trouble," but man who is born of woman should not be imbued with the idea that to have illicit sexual intercourse is a necessary penalty for being born with testicles, and so should we teach the young mind that illicit sexual intercourse is not necessary to sustain life nor to reproduce, but the diseases that it causes will destroy life and the reproductive organs, but so long as this earth is inhabited with two sexes

there will be some who will not adhere to this teaching and it is to them that we should direct our attentions and prevent them from infecting through marriage the pure and innocent daughters of our land. They should be taught methods of prevention such as using a cover, washing immediately with whiskey or some other antiseptic, and never to have such intercourse without some means of a wash is accessible. All prostitutes should be taught not to have illicit sexual intercourse without first examining the male by milking the urethra. By this method the spread of sexual diseases could be greatly checked. They should also be taught to always use a douche of quinine bisulphate, one teaspoonful to two quarts of water as warm as she can comfortably tolerate, preferably lying on back, ballooning up the vagina by holding the vulva and then allowing escape of fluid, repeating this until container is emptied. As this process will be of great benefit in preventing sexual diseases. The quinin bisulphate leaves the membranes soft and velvety in counterdistinction to the effect of lysol, bi-chloride and permanganate, which hardens the membrane, causing erosions and tears to the male organ, which may result in gonorrhea, syphilis, or other undesirable conditions. Posters should be placed conspicuously in the prostitute's home giving the best means of preventing sexual diseases, and any one, male or female, who knowingly or purposely infects another should be quarantined until they themselves are rid of the disease. Will our country give us a Dr. Gorgas for venereal diseases? As to abortive and systematic treatments, I have but little to say, as I have met with disappointments in some cases with about everything I have used. I have obtained best results by the use of silver salts, iodide of zinc, bi-sulphate of quinin, and hydrastis to irrigate the urethra. The urine should be kept neutral or alkaline by internal remedies of which there are many but boracic acid has usually given me the best results.

Veronal Poisoning.—A woman of 32 took 11 gm. of veronal with suicidal intent. When seen next day she was unconscious, the pulse 60, the respiration 18. The pupil reflexes were abolished and there was slight nystagmus, but there did not seem to be any sensation of heat, pain or contact at any point on the body for five days. Under repeated injections of ether, caffen and strychnin the woman roused the next day, but seemed confused, with hallucinations for three or four days more. There was no vomiting at any time or incontinence. The urine had to be drawn for the first two days.

FRACTURES.*

By C. K. BROSHED, Middlesboro.

The diagnosis and treatment of fractures at the present time is on a more scientific basis than ever before. The use of anesthetics in practically all cases should be resorted to, and when diagnosis can not be made the X-ray should be used if available.

One should use the greatest diligence in arriving at a correct diagnosis and then select a method that seems best fitted to hold that particular condition.

The courts may decide one should follow some recognized work on fractures, but one often will find he has to devise something different from what a text book may give.

Fractures may most conveniently be classed as open or closed. When first seen all cases should, if compound, have the area over and about the wound made as thoroughly aseptic as possible.

Probably our best results can be attained by painting with iodine 50 per cent. and covering with sterile gauze, after this temporary dressing—but never before, we can attempt an examination and put part in comfortable shape, so patient can be carried where he is to be permanently treated.

Most fractures can be left in a temporary dressing for several hours, or perhaps days, without causing any trouble or prolonging recovery.

This is not true of depressed fractures of the skull, or where blood vessels and nerves are injured or pressed on.

All fractures which confine patients to bed can best be treated in a hospital.

A fracture bed should have a firm mattress that will not sag from weight of patient.

No matter what method one uses in securing a fracture it should be inspected often to be sure it remains in correct relations. As the swelling subsides we may find, especially in the long bones that the bones are not in line, but that some fragment or splinter keeps the ends from coming in proper contact, even though the extension is complete.

I make it a rule to have some physicians see all cases of fracture with me, even should one not be available at the primary or first dressing.

Our best combined efforts are often futile or nearly so, as we can not always get the cooperation of patient or his family. When this can not be done one should refuse to continue in the case and have witnesses to the condition and reasons for quitting.

All fractures are serious as no one can tell what the outcome may be. In fractures of the skull explore all wounds, if possible and raise

any depressions, but often fractures here are best cared for by watching patient and preventing complications, or caring for them should they occur.

Fractures of base of skull are often difficult to diagnose and but little can be done for the fracture itself. Keep patient quiet, warmth to body and if needed, cold to the head, using sedatives to quiet if very restless.

Primary unconsciousness is not specially serious but if it comes on later it is often a forerunner of a fatal termination.

Fractures of the lower extremities give the physicians of this locality more concern than any other because we have more of them, and they are harder to handle successfully.

Fractures of the femur if near the joints should in most cases be treated in a partially flexed position or an incline or double inclined plane, as the muscles attached near the joint have a tendency to pull the short fragment out of line.

Other parts of femur should be held by long splints and Buck's extension, outer splint reaching from axilla to below the foot, all splints best held by straps and buckles which can be readily removed or tightened. Sand bags on each side of leg. These if compound are often very difficult to arrange so the wound can be properly dressed without disturbing or moving the fragments.

Many of our best surgeons now recommend bone plates or some mechanical union of fragments in all cases, but a fast rule for treating all cases should not be used.

Where fragments are not easily held in place a bone plate should be used if patient can have the proper surroundings and one capable of doing such work.

Great care must be used in making an incision over a fracture as the tissue is usually contused and not in good shape to resist infection. We should wait a few days for swelling to subside, and while infection in such cases may not cause death it is harder by far to prevent infection in these cases than in the peritoneal cavity.

Metal, bone or ivory plates, wire, nails, or bands, may be used, but the plan in all cases is to hold bone in exact apposition.

Plates can be used in open wounds but will usually have to be removed as soon as union is fairly firm.

Fractures near or in the joints are usually the most difficult to get good results. In these cases the plate or wire are very helpful in getting perfect results, but should we have infection, it would defeat the end for which we aim and leave patients worse on account of adhesions of capsule and surrounding tissue.

Another reason for great care in treating fractures is the effort of the people of this

*Read before the Bell County Medical Society.

community backed by unscrupulous lawyers, hold us liable for bad results, regardless of the original condition and lack of co-operation on their part.

Nearly all mal-practice suits are brought in fracture cases not because our results are worse in this line of practice, but because the condition shows for itself.

An attorney, just recently, held up an arm and insisted that its appearance indicated or was evidence of improper setting.

MEDICAL FADS AND FANCIES VS. MEDICAL FACTS.*

By H. C. CHANCE, Middlesboro.

A medical fad would be something that all, or at least, many of us do because it is being done by others, and without a full knowledge of the results to be expected or the reason why we should do it. A fad many times consists of merely getting into a rut and refusing to see if we are doing the right thing.

Sometimes we are forced into a fad by our patients, who having heard that the great Doctor So-and-So cures his patients by some marvelous new drug or operation and we must at least pretend to do the same for them. Any method or drug that gives a good result in a given condition or disease is apt to be taken up and used by the masses of doctors without analysis of the condition with which they have to contend, and as the most of acute conditions and many chronics naturally tend to recovery, we are apt to get enthusiastic—get a fad, when the circumstances by no means justify that course. How many times we see cases of acute disease get well in the usual time without what we considered ten or twenty years ago, as essential treatment. In other words, we are continually jumping to new fad in our treatment and I am sorry to say we sometimes treat our diagnosis the same way.

How many of us have not seen the plausible, tactful and very successful physician who has two diagnoses for every acute febrile condition; i.e., pneumonia in the winter and spring, and typhoid in the summer and fall. I have seen this go to an extent that was fairly disgusting. Once being asked by the other fellow's patron how many cases of pneumonia I had and honestly telling him I had not seen a case in three years, he told me his doctor had had sixty that season. And we were covering the same field and seeing approximately the same number of patients. *Now that was a fad or an uglier word of the same length.* This must be a fad that pays or we would see less of it.

Nearly all fads in the treatment of the sick have a modicum of good in them but we are apt to take an extreme view one way or the other, and if it catches us at full tide, we use it blindly until forced to see we are fooling ourselves and then discard it entirely, thus making a mistake both ways.

The great appendectomy fad—with apologies to our surgeons—has probably been carried to a farther extent than possibly any other unless it was blood-letting. We have all seen so many sound appendices removed by surgeons and would-be surgeons that we sometimes get sorry for the little devil, although he is capable of stirring up lots of trouble on occasion. This fad is already being abandoned to a great extent by our better and richer surgeons, though still the best source of income for the beginner. This operation will never reach the low level that blood-letting has, because we are broader and more tolerant of the other man's opinion, than were our predecessors of forty years gone. Medical fancies are largely medical fads in embryo, or rather the doctor afflicted is embryo.

Ideals, fancies and desires are largely the possession of young people, not because the young are more clever than the old or less wise, but because the poet, philosopher or martyr that lives in us all is apt to be starved to death by the time we reach middle life. The young physician, when leaving college, is probably fuller of fancies than any other of God's creatures on earth. He fancies riches, fame and popularity are his in unstinted measure and that Old Doctor Pills will soon be out of business and begging a job attending his overflow practice. He still fancies when the dead-beat slaps him on the back and tells him, "You are my doctor," never thinking that the old doctor has just refused to work longer for the dead-beat and is letting you have him to learn on. He fancies the old man is rusty on diagnosis because he has no well-equipped laboratory. Then the baby throws a fit and he makes a diagnosis of hydrophobia or tetanus and advises complicated measures, but just then the old man comes on the scene and with evident relief to the folks and glancing over the patient says "worms" and gives a big dose of santalin and proves his case.

Dr. Duncan Eve tells one on himself, when he was a beginner, his father, a famous surgeon, was making his calls as light as he could; but was out one day when a well dressed stranger entered and asked him to reduce a shoulder dislocation. Bursting with self-esteem, he placed the man on the table and with his best flourish, pulled. No result. Trying again with all the classic manipulation, he

*Read before the Bell County Medical Society.

began to lose some of his egotism. He did his best for some time before noticing the entire absence of pain on the patient's part. Then asked abruptly, "How long has this shoulder been out?" and was told, twelve years.

Yet, withal, if he makes a break and has sense enough to know it there is hope for him, and if he has industry he will succeed. Initiative and enthusiasm add to the measure of success, and tact adds still more, but few there be who possess, or try to acquire the whole string. When you do find one with all those qualities, you will find a fellow heading for the front.

It is so easy at this stage of the game to deviate from the straight and narrow way of professional purity, that only a few go through this period unscathed. The pay and blandishments of the wrong road look so enticing to the perhaps hungry beginner, that it takes high ideals, and an iron nerve to go straight. If a fellow sees a good chance to get his name, or better still, his picture in the newspapers with the coin that has a tendency to follow in the wake of printers' ink, it's a wonder we don't see more of it. This speaks very high of our medical teaching staffs.

The most pronounced fact in medicine as a profession is the jolts a man is going to receive who starts out with a conscience and tries to use it. After watching the "Ethics," or rather lack of ethics, of a great number of the upper class men in the field, he thinks of the old farmer at the circus, who, after looking the giraffe over from several different sides, remarked "Oh, Hell! There ain't no such animal."

He sees the instructive shrug, the meaning look and the apparently innocent "You must be mistaken in what the doctor said—or did," when discussing the absent physician; although this villain knows that what the doctor did or said was the perfectly proper thing in the case in question. He sees the active and sometimes paid steerer of this physician working in the homes of his patients and knows full well that everything he says or does must undergo twisting and pruning to show him at a disadvantage. Verily the feudal spirit must always be educated out of the doctor, or funerals would be much more common in the profession than they now are. This baneful condition of affairs, I am afraid will be with us for a long time yet, though I for one fail to see the profit to be derived from that course. A man can only improve his condition fighting the profession by cutting loose entirely from honorable medicine and going into out and out quackery. If I should lower my neighboring physician in the opinion of his clientele, I should suffer the same falling in his esteem. But I am in haste to turn over

the picture and tell you that there is almost enough leaven to spread to the whole lump; enough righteous to save Sodom. We find genuine doctors who never intentionally speak lightly of another's work or opinion. It is a fact that the true physician devotes almost as much time and energy to keeping people well, free, as he does to curing the sick for a consideration; in other words, his altruistic work takes as much out of him as his bread winning. There are lots of these workers in all ranks from the big city man who pays income tax down to the country doctor, who collects \$500 a year in chickens, fodder and dried pumpkin.

One of my most satisfactory thoughts is of some few physicians against whom I have bumped more or less frequently for the past twenty years against whom I cannot in my inmost self hold a single charge. Of course, they stand out among some things not so pleasant here and there like rocks in running water. These are the men you are not afraid to leave in the room with your patient when you are out—not afraid to say, "Go see a certain case for me to-day. I can't." Knowing full well that you will receive even more praise than you deserve. This is probably the most pleasant fact in medicine. Of course, the great surgical facts of Harvey and Lister, the great conquest of diphtheria, typhoid, malaria, yellow jack, etc., have been worth more to humanity than all other worldly achievements, yet the brightest star in any physician's crown is to be spoken well of by the physicians with whom he has come into intimate contact in the struggle for an honest living from the practice of medicine. A man may be all kinds of a "Shyster" and hold the good will of many laymen, but only the true blue are respected by the doctors, who know them in the field of their labor.

Pain from Small Fibromas in Pregnant Ulcers.

—Stavrides reports three cases in which fibromas—two small to be detected outside of a pregnancy—suddenly became enlarged and painful at the fifth or sixth month of pregnancy. Each could be felt as quite a large tumor sessile on the uterus and causing a slight reaction on the part of the peritoneum. Under repose and moist heat the disturbances subsided and the pregnancy progressed unmolested to term. Palpation three months later failed to reveal any trace of the tumor. It evidently had been located in the parenchyma, but under the stress of the pregnancy had parted the fibers in the wall of the uterus and forced its way to the outer surface. In a later pregnancy in one of the cases there was no disturbance from the minute fibroma, although it must still have been in its place in the uterus wall

DISEASES OF THE SUPRARENALS.*

By O. P. NICHOLS, Pineville.

Until recent years the activity of the ductless glands was practically unknown, and it was not until after the experiments of Oliver and Schafer with the action of suprarenal extract that the study of the suprarenal glands received any very great attention.

I shall not in this paper attempt to adhere to the disease of these glands, so much as to give a cursory survey of what has been learned about their function. It is useless to say that the suprarenal glands belong to the system of ductless glands, and consist of two portions, a cortex and medullary portion.

Histologically, they are composed of a brownish-yellow outer portion, or cortex, and a small mass of brownish-black color-forming the inner, or medullary portion.

The development of these bodies has been the subject of much study, and the most widely accepted view is the one based on the studies of Leydig, that the medullary substance is developed from the sympathetic nervous system, which is epiblastic in origin, and that the cortical portion is derived from the Malpighian corpuscles of the anterior part of the kidney. It is claimed by Weisel that the suprarenals contain elements that are identical with the ganglionic nerve cells, of the ganglia of the sympathetic system. Biedl says that many of the structures found near the abdominal sympathetic system, and composed of the same tissue, are called suprarenals. It is pretty generally conceded that the medullary portion of the gland furnishes the active principle epinephrin, and is the portion that is essential to life. Shafer supports the theory that they furnish an internal secretion that is responsible for the muscular tone of the cardiovascular system, and also of the skeletal muscles.

Brown-Sequard and others claim that they are also eliminative, and that destruction of the suprarenal bodies leads to the development of toxic agents in the blood and in from one to three days to death. It is the blood vascular effect with which we are most familiar, and which claims our especial attention. There can be no doubt that many of the manifestations of age are dependent on and in direct ratio to the soundness and activity of the suprarenal glands. Several observers have shown that repeated injections of the suprarenal extract have brought on varying degrees of arterial atheroma. It would seem that the extract acts directly on the cardio-vascular walls and not through the vaso-motor system.

Crile in his experimental work has been

able to revive animals after complete cessation of all function for as high as fifteen minutes by the intravenous injection of adrenalin. He was also able to keep the circulation of a decapitated dog going for ten and a half hours by the continuous injection of adrenalin.

Doyon found that as a result of intravenous injection of the drug contraction of the muscular coat of the bronchi occurred—in fact a picture of asthma was produced. Bardier and Fraenkel have shown that the intravenous injection of suprarenal extract caused a reduction of the output of urine and even suppression.

Blum, Zuelzer and Metzger have established the fact that the injection of the suprarenal extract has been capable of producing glycosuria, while Herter and Richards found that the intra-peritoneal injection of adrenalin chloride was also capable of producing glycosuria.

It is hard to account for these phenomena of glycosuria, except on the basis of altered metabolism of carbo-hydrates.

One of the newer and most novel views of the function of the adrenals are those set forth by W. B. Cannon of Harvard Medical School, which he terms an "emergency function." It has been shown by a series of experiments that when a full dose of suprarenal medulla extract is introduced directly into the blood, a series of profound physiologic reactions may be noted.

First, there is a cessation of all the activities of the alimentary canal, attended by a great shifting of the blood supply from the great vessels of the abdomen, to the lungs, heart and central nervous system.

These phenomena are usually accompanied by increased cardiac vigor and blood pressure also an increase in the sugar content of the blood. It has also been shown that similar changes in the circulation, etc., are also produced by nervous discharge along sympathetic pathways, which may be sent out during great emotion or great pain, fear or anger.

It has been further shown that the suprarenal medulla may be activated by direct central nervous impulses by way of the splanchnic, the artificial stimulation of which will induce secretory activity with an increase of epinephrin in the blood.

Complete removal of the gland has been followed by death within a few hours, with symptoms of toxic poisoning, however, while in this condition the injection of suprarenal extract, has almost universally been followed by improved heart action and increased blood pressure.

I have cited a number of these experimental phenomena, for the purpose of showing the extreme importance of the study of these act-

*Read before the Bell County Medical Society.

ive agents in the various body functions. It is of especial interest to note the close relationship existing between these ductless glands. The pituitary gland also stimulates the heart action and raises blood pressure, very much in the same way, but possibly through the medium of the sympathetic nervous system and not by direct stimulation of the cardio-vascular wall. It also stimulates muscular activity, and especially is this true as regards the uterus.

There can be no doubt that the organic functions of the body are controlled by some specific influence, that in all probability acts by and through the sympathetic centers, and which must be acted on by and through the blood containing these internal secretions. It has been suggested that these influences are brought about by chemie agents known as hormones. It may be that the further study of these internal secretions, may in time explain many of the obscure medical mysteries, that have hitherto been unexplained such as birth marks, human monstrosities the loss of color pigment in the skin over night, or the sudden turning of the hair gray from some great emotion.

Marks states that monsters showing failure of development have been found to have no suprarenal bodies.

From an analysis of these and other well authenticated phenomena, it would seem that all glands, whether they have excretory ducts or not give to the blood some useful principle, the absence of which is felt whether they be extirpated, destroyed by disease, or are a congenital defect.

The principle disease that has been thought to depend on disease of the suprarenal bodies up to within recent times, is that of Addison's disease, however, it is claimed by observers of the present day that the classical symptoms of Addison's disease, may be found when there is no change in the suprarenal glands.

It is too early to make a positive statement about the various effects on the system produced by the ductless glands, but there seems sufficient evidence to warrant the belief that they give to the blood certain secretions, hormones, or chemical messengers, that play a very important part in maintaining the proper systemic relations, and perfect body metabolism, that go to make up the sum total of what we term health. If this be true it is also true that when the chain is broken by the removal of any one of these, either by mechanical means, by disease, or by congenital defect, the system is sure to suffer and disease and malformation follow.

RHEUMATIC FEVER.*

By T. H. CURD, Middlesboro.

An acute, non-contagious febrile disease, associated with more or less profuse acid sweats, and characterized by an exudation, non-suppurative inflammation of the joints, and a peculiar tendency to secondary involvement of the endocardium, pericardium, and heart muscles. Its development and cause distinctly suggest an acute infection of the septic type, but suppuration is uncommon and the direct mortality does not exceed two per cent, due usually to cardiac complications of the malignant type, or to profound toxemia, manifested by hyper-pyrexia and major cerebral symptoms. It involves chiefly the larger joints often in an orderly progressive sequence transferring its maximum of swelling and pain from one joint or pair of joints to others. If untreated, it is of long duration, and in any event, is peculiarly likely to recur at longer or shorter intervals unless a primary focus of infection is demonstrated and removed.

Its toxins affect the valves of the heart muscles with peculiar frequency, pericardium or pleura less often, the peritoneum rarely.

Its chief effects appear in the mitral valve and the left heart chamber; this being especially true in childhood, during which period aortic lesions are relatively rare. Its almost specific response to certain remedies, and radical procedure of etiologic, diagnostic and prognostic value. The onset and source of acute rheumatism has long suggested the presence of a germ, as a causative agent, and in the light of reports made during the last decade, it becomes exceedingly probable that one or possibly several organisms are capable of producing it. The old metabolic theories in which both uric and lactic acids play the prominent part, must be abandoned in the light afforded not alone by lack of truth offered in support of such assumptions, but by the reports dealing with recovery of germs from the joint tissue exudates and in rare instances from the blood of rheumatic patients.

Mantle, Klebs, Singer, Popoff, Wasserman and others reported a diplo-coccus or a diplo-streptococcus and this organism has been repeatedly recovered, grown in pure culture and shown to produce consistently an acute arthritis in a large series of rabbits by inoculation; a diplococcus sometimes appear like a short chain streptococcus, and is regarded by Poynton as a diplococcus in relation to species. This organism is recorded from acute rheumatic lesions but is rarely found in the blood or joint exudates, though very readily according to Poynton, Payne and

*Read before the Bell County Medical Society.

others, in the synovial membrane. So far the profession as a whole has not been willing to accept these diplo-streptococcus or any single organism as the specific cause of the disease.

On the other hand, the numerous reports bearing upon the intimate relationship between infections of the tonsils, accessory sinuses, pharynx in relation to rheumatism and endocarditis go far to indicate, not only that rheumatism is an infection, but that it is associated in an extraordinary number of cases chronic or acute tonsillar infection, associated with the presence of a streptococcus, and a staphylococcus; the former being by far the most frequently involved organism.

Poynton quotes Dr. Cheadles excellent summary on the general grounds upon which one assumes that acute rheumatism is an infection. The occasional epidemic prevalence verability type, the incidence upon the young. The occurrence of tonsilitis, of endocarditis, of pneumonia, of erythematous eruptions, rapid anemia, tendency to capillary hemorrhage and albuminuria, the implication of the joints. The relapses, the occasional superventions of hyperpyrexia, nervous disturbances, the specific power of salicylic acid, all are suggestive of an infectious disease.

It is seen in all climates, but rare in the tropics. The disease occurs in epidemics, without regular periodicity, but which recurs at intervals of three, four and six years; that they vary much in intensity; a severe epidemic is apt to be followed by two or three light outbreaks. Acute rheumatism occurs in all countries and at all seasons. It prevails most extensively beginning in the spring months; it shows a marked predilection for temperate climates and summer seasons; no race is exempt.

It is a disease of early adolescence and early manhood and womanhood, the greatest liability of the disease being between the ages of ten and thirty; infants are rarely affected, and probably many of the cases which have been described, belong to a totally different affection; the arthritis of infants in exceptional cases, however, true rheumatism does occur. It attacks the strong and vigorous person, as often as it does the feeble and debilitated; there appears to be a personal predisposition to the disease, and a person having had it once, predisposes to subsequent attacks.

Males are affected oftener than females; up to the age of twenty, however, predominate in males; but between the ages of ten and fifteen girls are more prone to the disease. Occupation and location which necessitates exposure to cold, and the great changes in temperature predisposes strongly to the disease; such as soldiers, sailors, teamsters, miners and out door laborers and also people who live in

damp or ill-ventilated houses, basements and sub-basements.

SYMPTOMS.

The onset may be general or sudden, if it is gradual the patient will start general malaise, headache, chilly sensation, slight fever; irritability, sleeplessness, lack of appetite and irregular pains about the joints; there may be slight soreness in the throats, should the attack be sudden there are marked chills with a rapid rise in temperature with severe pains in one or more joints.

With the establishment of the disease the patient presents the appearance of a very sick person; the pain and tenderness are so marked that the patient lies perfectly motionless, with the joints slightly flexed, usually one of the larger joints is first affected, as the knee, elbow, ankle, shoulder or hip. The sternoclavicular, intervertebral, temporo-maxillary, the symphysis pubis and the sacro-iliac articular surface are rarely affected. The joints are swollen, inflamed, painful and tender, and the cases differ as to severity and tenderness, the number of joints involved and the way in which one joint after another is involved. The general symptoms are those of a marked febrile condition. The skin is usually moist; patient may be bathed in acid perspiration; this is a striking feature of acute articular rheumatism, and thus it varies from other severe febrile conditions; the skin may however be hot and dry, the tongue is coated, nausea and vomiting often present. The bowels are usually constipated, or the patient may have a serious diarrhoea, a true intestinal perspiration, and the urine is highly acid, diminished in quantity, dark color and albuminous rich in urea and urates. The intelligence of the patient is usually clear, but suffers greatly and is usually very irritable; restless and sleepless, due to pain. The pulse is full and rapid, rate from ninety to one hundred. But delirium is exceptional in uncomplicated cases, and is usually associated with a temperature of 104 degrees F. In cases of average severity the general feature of subordinate to the local symptoms, the fever is usually moderate, not exceeding 104 degrees F., in the evening, and the temperature curve is of the irregular intermittent type corresponding in severity with the joint symptoms. Nervous symptoms are rarely observed.

TREATMENT.

I have very little to say; however, the sick room should be well ventilated, and its temperature should be from 65 to 70 F. Drafts should always be avoided. Patient should be lightly dressed, and placed on a soft comfortable bed. The diet should be of liquid, such as milk, butter milk, soft cooked eggs, etc., during the stage of the fever. Alkaline drinks

should be used in large quantities but no drinks containing alcohol should be given.

The affected parts should be made immovable, and heat or cold applied as indicated. Some of the liniments may be used to advantage.

The list of drugs are too numerous to enumerate—I only mention those in common use—those giving best result are salicylic acid, salicylate of soda, stronthium, asperin, anti-pyrin, acetanilid, also the serum treatment; antistreptococcus is used where it is thought due to streptococcus origin. Some claim to have secured good results from the use of phylacogen.

CHOLECYSTITIS.*

By LEWIS J. JONES, Middlesboro.

Catarrhal chole-cystitis is a catarrhal inflammation of the lining membrane of the gall bladder due to infection. The commonest infecting agents are the colon bacillus and the typhoid bacillus. The continued presence of these bacilli in the gall bladder is very apt to be followed by formation of gall stones. This is especially true if catarrhal cholecystitis is present.

The following facts must be clearly borne in mind:

1st. The first attack of catarrhal chole cystitis is often overlooked, being mildly in character and transient. It is apt to be followed by recurrences.

2nd. The severe attacks are quite characteristic. They are accompanied by slight fever, epigastric pain, tenderness in region of gall bladder, and gastric symptoms lasting several days.

3rd. Either the mild or severe attacks may result in a chronic catarrh which leads to the formation of gall stones.

4th. Catarrhal cholecystitis may probably be chronic from the beginning and insidious in its onset. In these cases gall stones may form without a preceding history of pain or digestive disturbances.

5th. The symptoms from which the patient suffers are due in a large proportion of cases to cholecystitis and may be entirely independent of stone.

6th. Only in a minority of cases is a clinical history dominated by the stones themselves.

TREATMENT OF ACUTE CATARRHAL CHOLECYSTITIS.

The simpler attacks of cholecystitis are treated like cases of acute gastritis or acute indigestion, with which conditions they are often confounded. If the stomach contains

food at the onset of the attack vomiting should be induced by administering large quantities of luke warm water. The addition of salt or mustard to the water has no advantage. If vomiting is delayed, the patient may hasten it by pushing his finger as far back on the tongue as possible. The use of stomach tube is rarely, if ever, indicated. One act of vomiting does not usually empty the stomach. It is best for the patient to repeat the process one or more times till the water returns clear. Complete rest is then necessary. If tenderness in the gall bladder exists warm wet compresses should be applied. The patient should usually abstain from all food for at least 8 or 10 hours, though a cup of hot tea and dry toast can often be taken to advantage one-half to one hour after cessation of vomiting. Continuous wretching can best be combated by an ice bag over epigastrium, preferably applied directly to the skin for a few hours. Equal parts of spirits of chloroform and camphor in 5 to 10 drop doses on cracked ice is an efficient remedy. Morphine in small doses given hypodermically if pain and vomiting are excessive. When, for one reason or another, morphine cannot be administered hypodermically, some opium preparation may be taken by the mouth. Paregoric in teaspoonful doses, best given in wine glass of hot water, repeated 2 or 3 times at short intervals, may be tried. Laudanum or deodorized tincture of opium may be added to the dose, so that each teaspoonful of paregoric contains 10 minims of the deodorized tincture. Administration of remedies by the mouth is exceedingly unreliable because absorption from the stomach probably does not take place, and gastric peristalsis is either inhibited or reversed. Caution against poisoning the patient must be observed. Hot applications over the epigastrium and right hypochondrium are useful. Wet applications are better than dry. There is no value in excessive heat and the zeal of the attendants to scald or burn the skin has nothing to recommend it. Thick flannel or a folded towel wrung out of very warm water answers every purpose. An oil silk covering is useful. If the swelling of the gall bladder has been recognized during the attack, and if tenderness of the gall bladder remains after the attack, the patient is confronted with the probability of relapses and with the possibility of the formation of gall stones. Under these circumstances it is clear that the treatment of patient should not cease with the passing of the attack. It is highly probable that careful and prolonged after treatment will prevent a recurrence of the attacks, and may prevent the formation of gall stones.

TREATMENT OF CHRONIC CHOLECYSTITIS.

There is no medical treatment for gall stones as such. By medical means we can-

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not effect any important change in the gall stones themselves. As in an important corollary to this statement, it must be added that gall stones as such do not usually produce symptoms. The history of a patient who has gall-stones is usually determined by inflammatory changes which persist in the gall-bladder or which recur or flare up from time to time. Exceptions to these generalizations are found in those in which the gall bladder is packed with and over distended by a large number of stones, and in those rare instances in which, in the absence of inflammatory attack, the stones become lodged in the excretory ducts of the liver. The treatment of chronic cholecystitis includes local measures, physical rest, dietetic regime, and the use of mineral waters and drugs.

Local Measures.—Local measures are indicated during the exacerbations of inflammation. Very warm compresses are to be preferred except in acute purulent exacerbations, when an ice bag should be given the preference. Among the local measures may be included colon irrigation with physiological salt solution. Nearly all pathological processes within the liver are alleviated more or less by this means, the irrigation should be performed daily during the subacute inflammatory stage. When the patient is able to take large quantities of hot salines the colon flushing may be discontinued.

Rest.—The value of physical rest in the treatment of cholecystitis has not been sufficiently emphasized. There is no doubt that violent exertions tend to bring on attack of colic and retard recovery. Horseback riding, automobile tours, and all athletic sports must be prohibited for months following any active symptoms.

Diet.—During the acute inflammatory stage the diet should be limited to cereal, soups, gruels, milk, and limewater, bread and toast. In general terms it may be stated that all greasy and acid foods must be prohibited.

Mineral Waters and Drugs.—The value of the saline mineral waters in the treatment of cholecystitis is universally recognized. The alkaline waters neutralize or reduce gastric acidity; they flush out the bile passages, washing out the liver, as it were; they tend to reduce catarrhal processes in the stomach and upper intestines. They are supposed to keep the bile thin and stimulate its flow. The best time to administer saline waters is from 1-2 to 1 hour before meals when the stomach is nearly or quite empty. Carlsbad is the most famous resort for gall-stone patients and most of the artificial formulae are imitations of Carlsbad waters.

Before the pathology of cholelithiasis was so well understood the treatment was often directed to the solution or expulsion of calculi.

No one believes now that gall-stones within the gall-bladder can be dissolved by the administration of drugs. The use of strong purgatives for the purpose of expelling the stones is not to be recommended. Large stones will not pass; smaller ones are apt to lodge in excretory ducts, and even if some stones were expelled others would be likely to remain behind. Milder cholagogue given for a long period of time, such as pure oxbile, bile salts, salicylate sodium, and various combinations of the above are advised by many clinicians. Pure olive oil has a preeminent reputation with the laity and has proved useful in allaying many symptoms. It is best administered in gradual increasing doses before meals and at bed time. Just how long we should persevere with medical treatment depends upon the conditions present in each case. No absolute rules can apply. So long as the patient is in good condition and free of fever and pain we can afford to temporize. Continuous loss of weight, regular though slight rise of temperature in afternoons, or pronounced debility may be considered more imperative indications for operative interference. The waiting period may extend ordinarily from 1 to 3 months. To prolong medical treatment beyond this period is to subject the patient to the danger of permanent damages to the liver structures, and increases the risk of the operation itself. In estimating the indications for treatments in the more chronic forms of gall bladder disease one meets with the greatest diversity of opinion. Some of the leading internists are radical in advocating surgical interference in every case, while some of the most experienced surgeons refuse operation more frequently than they perform it. Thus Frank Billings is quite positive in declaring in favor of surgery. He says "Gall-stone disease must be recognized as a surgical disease. The danger of cholangitis, hepatic abscesses, perigastrics adhesions, etc., occurring as a result of gall-stones is so great that even the most conservative physician may well hesitate to take the responsibility of non-surgical treatment. On the other hand Hans Kehr operated only on 1300 out of 4000 cases referred to him. Kehr also believes that 80 per cent. of all cases will become latent in time. In face of these facts he rejects for operation all cases except in the presence of the following indications: chronic chole-dochus obstruction, acute and chronic empyema of the gall-bladder; perforation, cancer. Relative indications: chronic symptoms, which cause inability to work or enjoy life. We thus have the curious spectacle of an internist of wide experience pleading for surgical interference in all cases, and a surgeon of still wider experience advocating conservative medical treatment in most cases in the absence

of vital surgical indications. It is impossible to quote all the opinions of the leading authorities on the subject. After a review of the subject the various indications for treatment may be summed up as follows: Indications for operative interference: (1) Acute purulent chole-cystitis threatening life. (2) Perforation of the gall-bladder. (3) Gangrene of the gall bladder. (4) Chronic distention and thickening of gall bladder. (5) Persistent dyspeptic symptoms, especially when accompanied by physical signs of a diseased gall bladder. (6) Chronic obstruction of the common duct extending over a period of 3 months. (7) Chills and fever in the course of the disease with signs of the enlargement of the liver, local tenderness or jaundice. (8) The presence of symptoms which seriously interfere with the work of the individual or his ability to enjoy life.

Indications for Medical Treatment:

- (1) Simple catarrhal cholecystitis.
- (2) The early attack of biliary colic, before the ability of medical treatment to render the stones latent has been thoroughly tested.
- (3) Cases of cholecystitis in which the attacks are infrequent, and not accompanied by obvious complications.
- (4) Cases of cholecystitis with predominating gastric symptoms due to hyper-chlorhydria and without marked local signs.
- (5) Cases with serious complications on the part of the kidneys, heart, or blood vessels which would render surgical interference dangerous.

Rubber Gloves: Technic of Mending.—Cotton describes his technic as follows: Take an ordinary library filing card, spread it rather heavily with ordinary library paste, and paste on it the rubber tissue (Cotton uses dentists' rubber dam of light weight), smooth this flat, and let the paste dry. Then when a patch is needed, cut one out, rubber, card and all, to fit the tear. Put the glove on the hand, inside out, moisten the patch with cement, let it dry for a few seconds, fit it on in cases in which it belongs and press it home hard. If the tear is large it is easier to lay the moistened patch down and fit the edges of the tear to it, then press. That is all there is to it, except for powdering the glove and laying it by. Later, soak it in water and the bit of card comes away as the paste dissolves. This gives a secure patch, adherent clear to its edges, flat and watertight, and fit to stand boiling as well as any patch is.

VACCINES AND SERUMS.*

CHAS. F. CLAYTON, Balkan.

Internal Medicine has made wonderful strides in the last few years and in serums and vaccines promises even more in the future for the diagnosis, prevention and treatment of infectious diseases. Polyvalent stock vaccines are usually employed by most of the physicians because they have found them efficient and always ready. They meet almost all the requirements of the general practitioner in his daily work and only rarely will it be found necessary to have an autogenous vaccine prepared. It's hardly worth while to go back over the history of serums, as most of you are familiar with the subject. Glancing at our Army Statistics one will appreciate the use of Typhoid Vaccine which shows a reduction of 90 per cent. in the death rate from typhoid in the American Army, 75 per cent. in the British Army, and 93 per cent. in the Japanese Army and equally as high a percentage in other communities where it is used extensively. We have also noticed the decrease in mortality from the use of antitoxin in diphtheria, and vaccine in small-pox. My own personal use has been very limited; I have used the Pertussis serum both the Bordet and the mixed in about fifteen cases; in three cases the results were very gratifying, but in the remaining twelve little or if any results were observed. I wasn't enthusiastic enough to continue using it. The Gonorrhoeal serum or the Neisser Bacterine (the mixed is usually employed) is very efficient in orchitis due to the gonococcus and also in gonorrhoeal arthritis and chronic gonorrhea.

Antistreptococcic serum is indicated in all streptococcic infections and yields splendid results in puerperal fever and erysipelas. In treating erysipelas I use ichthyol poultices and elix. chloride calcium in conjunction with the serum.

The mixed acne bacterins, I think, gives better results when used in conjunction with Soamin or at least I have found it so.

Rheumatic phylacogen I am more familiar with than the other serums. I have used it in both acute and chronic conditions, except in acute rheumatic arthritis where best results are obtained after the fever has subsided. I will not take up your time with case reports, but following is a report of my first case where phylacogen was used:

Case No. 1.—Sciatica—Mr. J. M., age 45, married, coal miner. When I first saw him he was suffering great pain from his hip down back of his leg, had been in bed five weeks and was taking about one and one-half gr. of mor-

* Read before the Bell County and Cumberland Valley Medical Societies.

phine a day. I tried Buck's extension and kept it on about two days, but he could not stand it. He had an organic heart lesion and a great deal of odema in both legs. I gave Phylacogen 5 c c at a dose every third day until 40 c c were given, after the first injection results were noticed on the second day; of course the first days he felt sore and weak, from this time on he kept on improving and in about three weeks he was able to go to work. The mixed infection phylacogen I have used in chronic bronchitis and bronchial asthma. I tried it also in some few cases of tuberculosis and think I have gotten some beneficial results. In one particular case of pulmonary tuberculosis with cavity formation and profound septic symptoms, I gave the mixed serum and results were not happy as all symptoms were aggravated.

I believe we cannot expect much results from any serum in the destructive stage of pulmonary tuberculosis as the prospects of a cure become more problematic.

In infected wounds some claim good results from the use of the serum. I have used it, but never gave it a thorough trial as I always used antiseptics with it.

Sometime ago I sent a patient to the hospital suffering from a gun-shot wound of the head, the point of entrance being the ear, and was treated by a physician friend with mixed infection serum. Antiseptics in this case could not reach the point of infection; splendid results were obtained. Have used the mixed infection serum in colds and have gotten good results. I tried it on myself first from 5 to 10 c c and usually got relief.

Bacillus coli is indicated in cystitis, fistula in ano, catarrhal jaundice and local infections caused by the bacillus coli most often used in post-operative work.

Anti-meningitis serum which is used in epidemic cerebro-spinal meningitis points of injection being the spinal canal after the withdrawal of about 20 c c of spinal fluid, the injection of the serum following and repeated every day as the need may be.

Tetanus antitoxin is used for immunizing and treatment and is worthy of mention. This serum should be given early.

The tubercular serum is valuable as a diagnostic agent, also as a curative in the insipient stage.

The old tuberculins were used more often as a diagnostic agent such as Von Pirquet test which consists of scarifying the arm usually on the inner side in three places, the middle used as a control and on the other two applying the tuberculin.

The Moro test which is a tuberculin ointment is usually applied to the abdomen by rubbing it on vigorously with the hands. In

both the tests you get a local reaction if positive.

Von Ruck's new vaccine is administered hypodermatically, the dosage being for an adult 0.6 to 1 c c. If positive you get a local reaction at point of injection which consists of a redness and swelling diffused over a larger or smaller area. The part is painful on pressure or may feel lame and tired. The reaction reaches its height in twenty-four hours and then disappears quite rapidly. Sometimes a general reaction is noticed and with this you have the usual symptoms of fatigue and lassitude to vague and aching pains which may be in the back-bones and joints with an accompanied rise in temperature which may reach 103 or 104 degrees.

The symptoms usually reach their height as in the local reaction in twenty-four hours. These symptoms, however, are undesirable and you should diminish the dose. As treatment continue the reaction grows less and eventually disappears. Like the old tuberculin this vaccine is diagnostic and also a curative in the incipient cases. This serum which Von Ruck prepares, I think, comes nearer filling the demand for treatment in tuberculosis than any other put on the market, and the medical profession owes as much or even more to Von Ruck than they do to Ehrlich for salvarsan.

Whooping-Cough.—D'Espine states that in 1913 there were 46 infants with whooping-cough in his service; most of them were bottle-babies and 9 were between 2 and 6 months old. Two succumbed to pneumonia already installed when the children were first brought to the clinic. Another died of tuberculosis and still another, enfeebled by chronic bowel trouble, died of general debility. The others all recovered; the mortality was thus 8.6 per cent. although strictly speaking, the whooping-cough can scarcely be held responsible for any of the deaths in this series. The mortality from whooping-cough throughout Switzerland is comparatively high. Statistics for the decade ending in 1910 show the proportion of the general mortality to be 1.10 per cent, from whooping-cough; 1.05 from diphtheria; 0.91 from measles; 0.3 from typhoid and 0.27 per cent. from scarlet fever. The whooping-cough mortality has not declined in Switzerland in recent years while in England it has dropped to one-half the former figure, but it is still four times that of Switzerland. The statistics for other countries are compared with these. All testify that whooping-cough is a serious disease and that it runs a more serious course in institutions than in private homes. Children with whooping-cough should be kept at home and given outpatient care as needed.

BONE GRAFTING FOR POTT'S DISEASE AND FOR UNUNITED FRACTURES.*

By EDWIN W. RYERSON, Chicago.

The transplantation of bone has passed the experimental stage, and is now a surgical procedure of very definite value. When done in the proper manner it is capable of producing results which are remarkable. When improperly done, the results may be disappointing.

In this paper will be discussed only two of the phases of bone-grafting; its use in the treatment of vertebral tuberculosis, and of ununited fractures.

It has become evident to the writer that the majority of cases of Pott's disease can be arrested and functionally cured by the use of a bone splint cut from the tibia and implanted into a groove made by splitting the spinous processes of the vertebrae. The splint will unite with the spinous processes, and will produce a strong and satisfactory ankylosis of the weakened area of the spine, forming a brace which is mechanically far more perfect than any kind of external apparatus.

The writer has performed this operation in forty cases, and the results have greatly exceeded his expectations. The majority of these cases have been apparently cured in six months.

F. H. Albee, of New York, is entitled to the credit of devising and perfecting this brilliant operation. His work is undoubtedly familiar to all of you, but a few points in the technique deserve especial attention.

The splitting of the spinous processes must be done accurately, and the groove in the tissues must be carried down to the arch of the laminae. The broadened tip of each spinous process is really the only portion which can be *actually* split, since the shaft, especially in children, is extremely narrow. The periosteum of the side of the shaft, however, must be carefully split off and turned aside with the corresponding portion of the tip.

The bone splint cut from the tibia should be taken from the flat subcutaneous portion of the tibia, and should not include the crest of the tibia. The splint should be long enough to extend at least three vertebrae above and three below the diseased area, no matter how extensive this may be. It is far better to ankylose too much of the spine than too little. The splint should always be cut with an electric motor saw, of which there are several satisfactory models.

The simplest saw is an electric drill made by the Chicago Pneumatic Tool Company,

costing \$40.00, and equipped with a 3-16 inch shaft, which carries a very thin circular saw-blade. A double bladed parallel saw-blade can be used in this motor, as well as drills, burrs and trephines.

This apparatus requires a sterilized rubber cloth cover, as the motor cannot be boiled.

Albee's own saw, made by Kny, Scheerer & Co., is very satisfactory, but costs about \$150.00. In addition to the other instruments used in the electric drill, Albee's saw will operate an ingenious doweling machine, which will turn down a rough bone splint into a long pin or spike, for use in pinning fractures of the neck of the femur.

A new saw has recently been put on the market by Dr. E. J. Hoglund of Chicago, which besides the saws, drills and burrs, has an excellent chain saw attachment for rapidly cutting out large or small areas of the skull. I have brought one of these saws with me for your inspection. It operates on the flexible shaft principle, instead of directly on the motor, and the shaft and cutting instruments can be boiled.

It is only fair to state, however, that in using the old drill-motor there has been no case of infection attributed to the saw. One advantage of the Hoglund saw is that it revolves more slowly and cuts faster than the Albee type of instrument, and does not heat the bone, thus requiring no water jet to keep it cool.

This subject has been treated in some detail because the writer feels that no man can cut splints properly with a chisel.

The sutures which are to hold the splint in place should be of strong braided silk, at least No. 12 in size, boiled in bichloride and then in paraffine, after the method of Lange. These sutures should be very strongly placed, preferably in the spinous processes themselves, and great care should be used to anchor both ends of the splint. Usually five or six such sutures are enough.

The kangaroo tendon, used by Albee, is not reliable, and may soften or break, which will allow the splint to spring outward under the skin. The silk will give no trouble whatever in most cases, but exceptionally may cause irritation after its work has been done, and may require removal.

ULTIMATE FATE OF BONE TRANSPLANTATION.

The recent work of Phemister, (*Surgery, Gynecology and Obstetrics*, September, 1914), has done much to clear up the divergent views regarding the behavior and ultimate fate of transplanted bone. He has shown that the preservation of the periosteum of the graft is of great importance, and that accurate adaptation is advantageous. It is probable that much of the compact portion of the bone dies

*Read before the Kentucky State Medical Association, Newport, September 22-25, 1914.

and is replaced by new bone, but during this transformation the bone graft preserves its function. This fact, of course, is of enormous importance, since it makes no difference to us clinically what happens microscopically, so long as the transplant does its work. In fact Phemister states that a reasonable physiological stress thrown upon the transplant stimulates its development. Adequate fixation diminishes the amount of callus formation. The life of the graft depends mainly upon sufficiency of blood supply and absence of infection, although a mild infection may not cause a failure.

The graft should in every case, be autogenous, derived from the patient upon whom it is to be used, since the probability of success is enormously greater than if some one else's bone be used.

UNUNITED FRACTURES.

These are seen most frequently in the femur, the tibia, and the humerus. In the femur, the most common and most troublesome occur in the neck, and they are, as a rule, the most ill-treated of all fractures.

The ancient hospital routine of the long side splint and the Buck's extension, is productive of many failures. The abduction method of Whitman, and the lateral traction of C. E. Ruth, are more efficient. Cotton's method of forcible impaction has not been attempted by the writer.

The most rational method of dealing with ununited fractures of the neck of the femur, or with the displaced epiphysis of adolescence is a direct operative exposure by a long anterior incision. The head and neck are exposed, freed and freshened, and brought into apposition by a traction machine. A hole is drilled through the shaft, below the trochanter, obliquely inward through the neck and into the head, and a bone spike from the tibia, or a steel nail is driven into the head.

While the traction is continued the leg is abducted as far as possible, and a long plaster of Paris spica is applied. In eight or ten weeks the nail can be removed, if a nail has been used, and in three months union will be complete. This method has given ideal results in a number of cases operated by the writer.

Ununited fractures of the shaft of the femur can be treated better by a strong tibial spike placed in the medulla of the bone than by any other method. This spike must usually include the crest of the tibia to be of sufficient size to fill the medullary cavity of the fractured bone rather snugly. It can readily be placed in position by pushing it almost entirely into the medulla of either fragment, and then teasing it half way along into the other fragment with an artery clamp. The

main object of the intramedullary splint is to prevent lateral displacement or overriding, and the alignment is maintained entirely by the external dressings. No attempt need be made to preserve the periosteum of this graft, as the living bone-cells will be a sufficient stimulus to union. One can hardly keep the periosteum from stripping off anyway, when one pushes the graft into the medulla. The alignment of the femur can readily be maintained by a properly applied plaster of Paris spica, and union will take place much more rapidly than by the use of a Lane plate.

The graft inlay method of Albee and the ivory inlay of Magnuson, are more difficult and less satisfactory than the intra-medullary splint. A traction machine is essential for the proper treatment of nearly all femoral fractures. There are several varieties on the market, and satisfactory devices can be improvised on most operating tables.

Ununited fractures of the humerus are also best treated by the intra-medullary bone splint, the alignment being maintained by plaster of Paris or by traction.

Ununited fractures of the tibia in children, are sometimes extremely difficult to handle successfully. The writer has in several cases repeatedly freshened and wired the bones with complete failure of union, and the same result has followed the use of the Lane plate. It is evident that certain of these cases present some actual deficiency in the osteogenetic functions, but the exact nature of the difficulty is not yet certain. Several of the children have received empirically various glandular extracts, such a thyroid, parathyroid and pituitary gland, in succession, and without benefit. Antirachitic treatment has also failed.

The only way successfully to handle these cases is to implant a bone graft from the other tibia, either an intramedullary or, preferably and more easily, an inlay. The same method is efficacious in the adult cases.

It will readily be perceived that the writer is not a warm advocate of the Lane plate. He believes that plates have been used in many cases where greater familiarity with more conservative measures would have brought about a satisfactory result. He believes that Lane plates, applied skilfully, by competent operators, may be necessary in a very few cases, but that in the majority of cases in which the Lane plate has given trouble, or has failed to cure, a bone transplant would have been found satisfactory.

DISCUSSION.

Irvin Abell, Louisville: The paper presented by Dr. Ryerson deals with a new method of treatment which has practically revolutionized the care of vertebral tuberculosis. Personally, I have

had no experience with the method, and judging from the reports of such men as Dr. Ryerson and those who have used it, it seemingly presents many advantages over the old method of dealing with such cases by means of jackets, plaster or other material. I would like to ask Dr. Ryerson in closing the discussion to state the exact indications for and its limitations of use. In other words, how much deformity would be a contra-indication to the application of the bone splint in such cases, and finally in the ultimate cure of vertebral tuberculosis by the bone transplant, how much motion can be expected by the vertebrae covered by the bone transplant? We know that under the older methods of treatment, where the cases are recognized sufficiently early, practically normal mobility of the spine will occasionally be obtained. Under the older method of treatment it is almost impossible in these patients, unless they are in a hospital that is properly equipped, to carry out satisfactorily such treatment. The long period of time required for it, absence of the child from its home, or if left in the home inadequate attention is given to it by the relatives, precludes the possibility of a satisfactory result; consequently if one can obtain motion with a splint of this kind by the use of the bone transplant, as I said in the beginning, it will revolutionize the treatment of such cases.

In regard to the treatment of ununited fractures, I heartily agree with what the essayist has said in regard to that; also in regard to what he said concerning the Lane plate. The Lane plate finds its greatest field of application in the maintenance of reduction of fractures, apposition of the bone ends, which cannot be held in apposition by external appliances. The results must be compared by having a large number of cases of fractures under observation. The proper use of the old conservative methods will in the majority of instances result in union. In a non-union, the result of mal-apposition, the Lane plate is preferable to the bone transplant if it can be demonstrated satisfactorily that non-union is due to faulty position. It requires less operation, it is easier applied, and there is less danger of sepsis in the use of the Lane plate in such cases. The greatest field of usefulness of the bone transplant is where non-union has resulted, not from malposition, but from failure of bone or callus formation. In such cases you are able to maintain apposition by external appliance, and yet due to some defect, which, so far has not been satisfactorily explained, the osteogenetic functions of the bone are not carried out. The osteoblasts do not reproduce bone and do not form bone. The Lane plate under such circumstances does practically little or no good. I applied a Lane plate to a fracture of the radius, the patient wore it for a year, at the end of which time apposition was good, but bony union did not occur. In another case the Lane plate was used in an ununited fracture of the tibia; the patient

had worn it for six months, and yet non-union still persisted. The bone transplant under such circumstances or in such instances by some means or some method which, so far has not been satisfactorily explained, does stimulate the production of bone, and in the experiments which have been made, and in the observations that have been made on patients so operated, in the majority of instances the transplanted bone has disintegrated and disappeared, but co-incident with the disintegration of the graft there has been multiplication of the osteoblasts and osteoclasts with bone reproduction and satisfactory union.

We are indebted to Dr. Ryerson for a most practical description of the method.

Joseph G. Gaither, Hopkinsville: This is an exceedingly interesting subject and one which is bound to grow. I would like to add a very brief case report of a replacement of a portion of the femur in a case which I had recently. The patient was injured by jumping from a moving freight train, and suffered a fracture of the lower third of the femur with the overlapping of two inches of bone. At the end of two and one-half months I first saw the patient with a false joint, and decided the only practical method would be, as Dr. Ryerson has outlined, the transplantation of a bone splint. To secure such a splint, I took from the tibia of the opposite leg, a peg possibly the size of my forefinger and about four inches in length. It was possible to anchor this easily in the medullary canal, reaming it out according to the method of Murphy, and driving it then from the upper fragment tightly into the lower. The patient had been in a cast for two and a half months previously, and was placed in a cast immediately afterward, so that at the end of three and a half months, when the cast was removed, the bony union was firm and complete, but there was considerable trouble from stiffening of the knee. This gradually disappeared; a great deal of callus has been thrown out between the two ends of the femur. The work has been done about four months. It was finished the last day of May. The patient is able to walk about with the assistance of a cane, and I believe will soon have every function of the knee, which was stiff. There has been a very rapid growth between the two ends of the femur. The question which has appealed to me has been the fact that the autogenous bone transplant is the one with which we get a hundred per cent. results. On the other hand, the heterogenous transplant is almost always a failure, and the homogenous transplant is frequently a failure. You must use one from the same patient. I have never seen a plausible explanation of why that is true. It occurred to me that possibly it might be due to the fact that each individual has what you might term an index to the various glands of internal secretion to which the cells both of the bone and other cells are accustomed. If you should transplant a tibia from one

patient to another, the crest of that tibia, you would take the bone from one person to another, whose index of metabolism is governed and controlled by the glands of internal secretion very differently. That the glands of internal secretion have a great influence over bone life is witnessed by the pathology which we find in disease of the pituitary body in acromegaly and of the thyroid gland in cretinism. We know that the index differs markedly for different individuals, and that I believe is the reason why the autogenous bone graft is much more successful than the heterogenous or homogenous.

As. Dr. Abell has suggested, I would like Dr. Ryerson to discuss in closing the limitations of the application of the Albee operation. I have a patient who is contemplating having an Albee operation and the limitations of it I am not quite sure about. The patient has a discharging sinus down the left side from a psoas abscess, and it seems possibly more than we can expect to effect a complete cure in this case, as he is going from bad to worse, and he is anxious, as most of these patients are, for relief.

Edwin W. Ryerson, Chicago (Closing): Regarding the limitations of the Albee operation, there are almost no limitations for it. I am becoming convinced that the safest and most conservative way to treat this formidable Pott's disease is by doing either the Albee operation, which to my mind is the more rational and successful, or the operation of Hibbs, which consists in turning down the spinous processes by a cut at the base and cutting a strip from each lateral process and turning them down in succession upon the laminae to form a bony ankylosis. If the patient has a discharging sinus in the neighborhood of the typhosis, it is not proper or safe to do either of these operations, because these sinuses are secondarily infected with pus cocci, and we would get pus infection which would result in failure of the operation. I have operated on people of fifty with complete success. The very young children of two or three years of age are not such good operative subjects because the bones are largely cartilage at that time, and the prospect of success is not as bright as in older children. The amount of deformity is not a contraindication, as I have operated on cases with enormous deformity. One has often to bend the splint by natching, as Albee does. In the adult the bones are too stiff and brittle to be bent, and they have to be scored underneath by the saw in the way a carpenter scores a piece of wood he is going to bend so that it will curve around. Any sinuses are swabbed out with iodine and a rubber protective sheet applied over the sinus, and only in one case has there been infection of the operative wound, and we were not sure whether it came from the sinus or whether a tuberculous mediastinal abscess burrowed into the wound.

The indications for Albee's operation or one of this type are, to my mind, all cases of Pott's

disease that are operable, in which there are no constitutional contraindications or any sinuses discharging in the line of incision. If we could get these cases before deformity has occurred, we could prevent it. I have operated on forty cases, and the results are amazing. People in three months after operation are going about with a light plaster of Paris jacket, and in six months they are going about with no jacket, with no sinuses. In two cases of paralysis it has disappeared, but one must remember that the operation itself has nothing to do with the actual tuberculosis in the spine. It simply furnishes one requisite in the treatment of tuberculous joints, and that is perfect fixation of the joints. Any tuberculous joint will probably get well if we can fix it perfectly for a long time, and that is what this operation does better than anything else. There should be no motion to any extent after the Albee operation has been performed. We do not want motion. If we could get the tuberculous portion of the spine absolutely fixed, it would be advantageous to the patient. I would regard it as a failure if there were motion in the spine. Nearly all cases of Pott's disease that recover get well with an ankylosis.

The Lane plate does not stimulate bone formation. In fact, it hinders bone formation, and if an ununited fracture is not due to the interposition of soft parts, the Lane plate is not as good as a bone splint.

The explanation of Dr. Gaither of frequent failure of homogenous or heterogenous transplants is ingenious; it is one which I have not heard before, and is just as likely to be the proper solution of it as anything I have heard advanced. I thank you.

Modified Bassini Operation.—Tenani's modification aims to reenforce the weak point in the abdominal wall by superposing the aponeurosis above and below. After the usual Bassini technique he sutures the internal oblique and transversalis muscles and the fascia transversalis to the posterior margin of the gap, and the upper flap of the aponeurosis of the external oblique. In making this fourfold layer he is careful to keep all the fibres in their natural position in regard to each other. Then he slits the margin of the aponeurosis across, on a line with the internal inguinal ring, slitting thus both the upper and lower flaps of the aponeurosis. The edges of the two flaps thus formed are superposed and sutured under the cord, drawing the whole toward the median line. In cases of an exceptionally large opening he resects some of the aponeurosis.

NEPHRITIS.*

By LEWIS J. JONES, Middlesboro.

We will dwell at short length on the pathology and physiology of the kidneys. In recent years experimental pathology and experimental therapeutics have furnished us with much needed information in regard to the action of drugs in pathological conditions.

The physiology of urinary secretion has not been definitely determined. Two theories each with worthy defenders must be presented. Ludwig's theory maintains that we have in the secretion of urine the simple process of filtration with the glomerulus acting as a filter eliminating from the blood, not merely the water, but also the solid constituents of the urine, viz., the inorganic salts and specific elements, urea, etc.

In recent years the adherents of Ludwig's theory have introduced some modifications, claiming now that the absorption taking place in convoluted tubules is selective in character, so that the theory as now held is not based upon the purely mechanical process of filtration and diffusion. Certain anatomical conditions in the kidney lend themselves to this mechanical theory.

The efferent vessels to the glomerulus is smaller than the afferent, and for this reason the pressure in the capillary tuft would be higher than in ordinary capillary. The great length of the urinary tubules might be considered as especially adapted for the reabsorption of the fluid passing through them.

The physical laws of filtration, diffusion, and absorption, as now understood, cannot account for the process. Serum albumen and egg albumen are both indiffusible through animal membrane, yet one passes through the glomerulus without escaping into the urine, the other is promptly eliminated. Two diffusible substances, as sugar and urea, are present together in the circulating blood; the latter is eliminated as a waste product, the former retained. If, however, the amount of sugar in the blood passes a certain limit, more than three parts per 1,000, it is promptly excreted. With a pure filtration theory it is difficult to explain how, in a starving animal, the amount of inorganic substance in the urine may be greatly reduced, while the proportional amount in the blood is only slightly changed. At the present time the vital theory of Bowman has a stronger support, permitting of a selective action of the cell. This theory assumes that the glomerular epithelium removes from the blood the water and salt of the urine by an act of secretion. The urinary tubules are not primarily for absorption, but their epithelial cells are actively secretory,

withdrawing from the blood especially the organic constituent known as urea. Although Howell states that the precise secretory products of glomerulus and tubule are not clearly defined by the adherents of vital theory.

Secretory nerves for the kidney have not been demonstrated, the secretion being directly dependent upon the rate of blood flow. When the arterial pressure falls below 40 m. m. of mercury as following shock, hemorrhage or extreme impairment of the heart muscle, the secretion of urine ceases. Everything which increases the blood flow, as increased blood flow or local dilatation of the renal vessel, without reduction in general blood pressure, such for instance, as follows the use of caffeine, intensifies the secretion of urine. So far as known, the only way the secretion of the kidney may be affected by the central nervous system is through a local nervous mechanism, by means of which the secretory activity is modified by corresponding alterations in the local blood supply.

The kidney is a very vascular organ, and it has been estimated that when under the influence of diuretics, within a minute's time an amount of blood equal to its own weight flows through the kidney. This is from 4 to 19 times as great as the average supply of other organs in the systematic circulation.

The Composition of Urine:—The normal color of urine in man is yellowish, with an average specific gravity of 1.020. Reaction usually acid, until recently attributed chiefly to the acid sodium phosphates. Folin's investigation shows, however, that it is due perhaps largely to organic acids. In addition to the water and inorganic salts the most important constituent of the urine is urea. It is in this form that almost all the nitrogen of the body is eliminated, as the amount escaping through the perspiration and feces is comparatively slight.

The edema associated with nephritis is not due to a single causative factor. In the hemorrhagic types the edema may be chiefly or entirely anemic in character. With the chronic interstitial type it is of cardiac origin, and only in some of the acute forms and in chronic parenchymatous nephritis do we have actual renal edema. The exact cause of renal edema has not been determined. The theories of water retention, chloride retention, vascular injury, and changes in the blood all have their supporters. In both acute and chronic nephritis increased arterial tension is a common occurrence. It is generally conceded that nephritis is by far the most frequent cause of the hyper-tension. In parenchymatous, and amyloid kidney, blood pressure is not increased, but in the so-called vascular types, glomerular and interstitial forms, hypertension

*Read before the Bell County Medical Society.

is the rule. This increased pressure may appear within 48 hours after the onset of an acute nephritis. With our present knowledge of hyper-tension in nephritis the exact cause has not been determined. Several theories have been advanced; none of which are free from objections. These theories assume that an effort to force more blood through the kidney in order to increase the elimination is the cause of hypertension. If this is true, the attempt to reduce the blood pressure may not be good therapeutics.

Uremia:—The symptoms of acute uremia can best be accounted for on the basis of intoxication. The clinical symptoms of nausea, vomiting, diarrhoea, delirium, coma and convulsions can scarcely be explained upon any other basis. It is generally assumed that the retention in the blood of products not normally eliminated by the kidney is responsible for the disturbance. The more nitrogen retention the greater is the danger of uremia. The treatment of nephritis may be considered under the head of prophylaxis, general principals, symptoms, and complications. The general principals include: First, to avoid as far as possible everything that might tend to injure the kidney; Second, as the kidney is impaired, to relieve it of excessive work. This to be accomplished by proper diet and by calling upon the skin and bowels to assist in the elimination of water and solids. Third, the use of such measures as would tend to restore the kidney to its physiological function.

The treatment of nephritis is chiefly symptomatic. Our efforts in acute forms must be devoted toward relieving the kidney of its work and removing, if possible, the cause of the trouble, thus tiding matters over until the disease subsides and the physiological function of the kidney is wholly or partially restored.

The treatment of a chronic interstitial nephritis is chiefly directed toward the heart. In chronic parenchymatous nephritis the heart is not usually involved, and the treatment is confined to the kidney. The important part of treatment is to avoid all those things, either in form of food, chemical, or habits of patient that might irritate the kidney.

To facilitate elimination through the skin a warm climate and suitable clothing are important. Bowels should be kept free to assist in the elimination of water, salts, and nitrogenous waste. As individuals are usually anemic, iron or foods containing iron should be given. To lessen the edema restrictions of fluid and salts is important. All of these measures are also included in treatment of acute nephritis. The chief causes of nephritis are the acute and chronic infections, chemical poisons, cold and pregnancy. Certain of acute infections are especially liable to

produce nephritis as scarlatina. Tonsillar infections are another important source of acute nephritis. There has been considerable difference of opinion in regard to the role of syphilis in acute nephritis. It may be extremely difficult to determine in a given instance whether mercury or the syphilis is responsible for the trouble.

There is a long list of chemical agents, many of which are frequently prescribed, which are capable of irritating the kidney and sitting up acute nephritis. It is important in the treatment of nephritis that drugs of this sort be avoided. It is also advisable in those acute infections liable to kidney complications that these agents be used with care. There are a number of drugs that are extremely irritating to the kidney and capable of exciting acute degenerative changes in the kidney. The more important are potassium chlorate, salol, carbolic acid, turpentine, salicylates, lead, phosphorous, alcohol, chloroform, ether, cautharadine, bichloride of mercury and arsenic. Especial importance is attached to the role played by mercury in nephritis. The readiness with which grave kidney changes may be produced in the lower animal by the use of bichloride impresses us with the importance of carefully watching the urine when mercury is used and the danger of attending its use with patients with nephritis. Although arsenic will produce a nephritis in animals, man tolerates it very well. The new arsenic preparation, salvarsan, from present reports is apparently only mildly irritating to the kidney, as only occasionally have albumen or casts been reported after its use. Salol is still more irritating and numerous cases of nephritis were observed as a result of the Woodbridge treatment of typhoid, in which salol played an important role. The application to large surfaces of the body, of turpentine, kerosene, iodoform, and mercury may cause acute nephritis. There is no reliable evidence that large meat eaters are especially prone to contract nephritis. Prolonged exposure to cold, and especially wet cold, should be avoided. Siegel has shown that dogs allowed to stand ten minutes in ice water and then placed in cage without drying, develop typical acute parenchymatous nephritis. When dog was placed in cold water and thoroughly dried before placing in cage, nephritis did not develop. The matter of action is not clear.

It has been assumed by Wertheimer that the external cold constricted the renal vessels, this leading to degenerative changes. We have too little knowledge of the agencies responsible for the kidney of pregnancy to discuss intelligently prophylactic measures. To refrain from using drugs that may act as a renal irritant and avoid exposure to wet cold is advisable. Although comparatively little is

known of the importance of diet in the toxemia of pregnancy, it is advisable in threatened cases to reduce the proteids to the minimum consistent with maintaining the proper nutrition. The patient suffering from acute nephritis is better off at home. Danger of over-exertion or exposure to cold renders traveling undesirable. The chief object of a change is to place the patient in a warm and dry climate, to dilate peripheral vessels and increase the elimination through the skin. In such a climate the patient is enabled to be out of doors in the sunshine and fresh air, factors which are of considerable importance. Change of climate is usually only to be considered in sub-acute or chronic forms. Climate does not cure the chronic forms of nephritis, but it makes the patient much more comfortable and not infrequently prolongs his life by preventing acute exacerbations and lessening the tendency to uremia. The patient with acute nephritis should have absolute rest in bed. This insures uniform warmth to the surface of the body, limits body nitrogenous waste to the minimum and reduces the work of the heart. Standing or exercise increases the amount of albumen and number of casts. Proper functioning of the skin is very important in all forms of nephritis, to maintain this frequent bathing is essential. When given, except for purpose of sweating baths should be as near body temperature as possible. There are no special advantages to be derived from medicated baths. Sweats are indicated in patients with marked renal edema, threatened nermia, or where extreme hypertension exists. The amount of water and solid constituents eliminated in a sweat may be sufficient to lessen an edema or alleviate a threatened uremia. The manner in which the sweat is given is of little importance. The only parts to be considered are efficacy and the comfort of the patient.

Diet is one of the most interesting problems in the therapy of nephritis. Formally strict milk diet was considered the only safe one. With increased knowledge of the functionary power of the diseased kidney, a more liberal diet is now permitted. In arranging a diet the following points should be considered.

First—To see that the patient receives a sufficient amount of food, and that it contain at least the minimum amount of the various food principals.

Second.—To avoid all food or drinks that contain substances which in course of elimination irritate the kidney.

Third—To avoid all excesses of those foods, the waste of which is eliminated chiefly through the kidney, viz., the proteids.

In considering this point it will be necessary to determine in a general way the ability

of the kidney in nephritis to eliminate nitrogen.

Fourth—To avoid, at least in certain cases, food containing large amounts of sodium chloride.

CLINICAL ASPECTS OF CARBOHYDRATE METABOLISM.*

By LOUIS HAMMAN, Baltimore Md.

When I was honored with an invitation to take part in this meeting of the Kentucky State Medical Association I suggested as the subject of my remarks several topics in which I happen to be interested. Your committee selected "Clinical Aspects of Carbohydrate Metabolism." Many years of interest in the clinical features of diabetes and more particularly recent study of cases illustrating derangement of the endocrine glands has stimulated me to follow the literature of carbohydrate metabolism. However, when I had arranged my notes to include the important facts pertaining to this subject the result was so voluminous that I must forego a reasonable desire to present the matter in an orderly fashion and select only a few of the many important aspects of carbohydrate metabolism for consideration.

To refresh your memory with the main facts of carbohydrate metabolism I would recall that sugar is furnished the body mainly in the form of starch, cane sugar and milk sugar. These polysaccharides are split into the simple hexoses, glucose, levulose and galactose. If absorption proceeds slowly these sugars are converted in the liver into glycogen; if absorption is too rapid a portion may appear in the urine. Normally, mellituria never occurs upon a starch diet but following large amounts of the hexoses or of cane sugar and milk sugar, glucose, levulose or galactose may appear in the urine and under exceptional conditions, small amounts of unconverted cane or milk sugar. While glycogen is readily formed from any of the three hexoses when it breaks down it always yields glucose. In the blood there is a relatively constant concentration of glucose averaging 0.08 per cent. When this normal high level is appreciably exceeded sugar appears in the urine. With rare exceptions all forms of glucosuria in man are consequent upon hyperglucemia. This constant level of blood sugar is maintained by a regulating mechanism of great complexity which we are just beginning to understand and which forms one of the most fascinating chapters of medicine. From the blood glucose is appropriated by the cells and used in the manufacture of substances that form an

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integral part of their structure, or stored as glycogen or fat or directly burned. The burning of sugar is not a direct combustion. The decomposition to water and carbon dioxide is a slow progression through many complex chemical stages, the intricate nature of which has not yet been fully elucidated. No matter what means we employ to reduce it the glucose content of the blood is maintained desperately at its constant level. In starvation it is reduced but little below the normal. If carbohydrate ingestion is suppressed the body will grasp the glycogen reserve and when this is exhausted will manufacture sugar from protein and perhaps from fat.

The digestion factor in carbohydrate metabolism has an important practical bearing. Normally glucosuria never occurs after an excessive amount of starch and even very large amounts of sugar administered in conjunction with other food seldom cause glucosuria. Difficulty of digestion and slowness of absorption are important factors in utilization. The character of the carbohydrate and the time of administration are therefore important factors in the dietary management of diabetes. It is probably to this digestion factor that the oatmeal cure owes its efficacy. It has been claimed that levulose and glucose have a different effect upon glycogenesis and that in diabetes when glucose is excreted quantitatively levulose may still be utilized. The accuracy of Minkowski's observations has been questioned and the distinction has no longer any practical significance.

I must neglect the interesting question of sugar tolerance and the glycogen function of the liver to hurry on to the more important topic of blood sugar. I wish merely to say that there is no good ground for the importance attached by the French school to the liver as a factor in clinical glucosurias. I regret that I cannot stop to say a few words about the interesting subject of sugar tests for hepatic function, tests whose clinical value has not yet been conclusively determined. Since Pflüger has finally succumbed there is no longer any doubt that protein is a ready source of sugar formation and all evidence points to the liver as the seat of the principal step in the transformation of the amino-acids into sugar. Of far reaching importance is the observation that all of the amino-acids are not sugar producers and that those which fail to yield sugar readily yield acetone bodies. The discussion over the formation of sugar from fat continues with unabated energy and no definite conclusion on this important question has yet been reached. However, the one important point to be emphasized is that feeding fat does not increase the glucosuria in diabetes. This is the key-stone of the dietary management of diabetes

and is so firmly established that one may hold fast to it while experiments establish or disprove the origin of sugar from fatty acids.

During the past few years interest in carbohydrate metabolism has been transferred from glucosuria to the behavior of the blood sugar. As I have said all glucosurias except phloridzin, glucosuria and the mellituria of nursing women and certain rare cases of so-called renal diabetes are secondary to hyperglucemia. It has long been known that alimentary glucosuria is often the earliest manifestation of beginning diabetes and the behaviour of the blood sugar after carbohydrate ingestion therefore acquires special significance. After a period of starvation the ingestion of sugar is followed in fifteen minutes by a definite rise of the blood sugar; after one hour the amount is almost doubled; the hyperglucemia then gradually subsides and disappears at the end of three hours. In well fed animals the rise is slower and less marked and if the tests be made in quick succession each repetition is followed by a less decided change until the effect is lost completely. Starch and vegetables have the same effect as sugar when administered upon an empty stomach but the effect is diminished in proportion to the admixture of other foods. In man bread eaten with butter has a much less decided influence upon the blood sugar than bread eaten alone. Our custom of eating sweets after meals thus finds a satisfactory physiological basis and the results likewise suggest obvious hints for the dietetic management of mild cases of diabetes. After protein there is normally no hyperglucemia but in diabetes there is a prompt rise in the glucosuria. The manner in which sugar exists in the blood has given rise to much discussion. Michaelis and Rona on the basis of dialysis experiments are inclined to believe that it exists in solution. On the other hand many authors insist upon speculative grounds that the assumption of some form of loose colloid combination is necessary to fit facts satisfactorily into any reasonable plan of sugar metabolism. Allen champions this view and for ease of explanation calls the combining substance amboceptor. Sugar, according to him, cannot be utilized by the tissues unless in such combination and the absence of this combining substance is the direct cause of diabetes.

Of all the regulators of carbohydrate metabolism the pancreas has held and still holds the point of highest importance. Removal of the organ in animals causes a severe glucosuria which persists whether sugar be given or withheld. In starvation or on a protein diet sugar is excreted in a constant proportion, the dextrose-nitrogen ratio being 2.8. The animal rapidly emaciates, acetone bodies

appear in the blood and death occurs in from two to four weeks. Besides the failure to utilize sugar there is also a profound change in the general metabolism. The hunger protein metabolism is increased three fold and fat consumption is likewise increased. This remarkable influence that the pancreas exercises upon carbohydrate metabolism is presumably due to some substance secreted into the blood stream for the pancreatic duct which may be tied off or transplanted so that the secretions are poured upon the surface of the body and no change in sugar metabolism occurs. When a small piece of the pancreas with the blood supply intact is transplanted subcutaneously glucosuria does not occur; when the graft is subsequently excised diabetes promptly sets in.

Of still greater clinical interest than total extirpation of the pancreas are the results of partial removal. These experiments were first performed by Sandmeyer and the condition has since been known as Sandmeyer's diabetes. When small portions of the pancreas are allowed to remain and the ducts are tied the animals at first do not become diabetic but as the remaining portion of the gland degenerates glucosuria develops and finally the picture following complete removal of the organ supervenes. Allen has shown that when a small portion of the pancreas is allowed to remain in communication with a patent duct a balance is often struck so that the animals are glucosuric after carbohydrate ingestion but the urine remains sugar free on a protein and fat diet. In dogs and cats he has made the remarkable observation that the ultimate outcome of this mild diabetes may be completely controlled through the diet. If, on the one hand animals are liberally fed with carbohydrate the diabetic condition progressively increases so that later they excrete sugar when given only protein food and finally they emaciate and die a typical picture of fatal diabetes. If, on the other hand, the animals are fed upon a protein and fat diet they are maintained in good condition and not only is fatal diabetes avoided but indeed after a certain period it is found that their tolerance for carbohydrate has increased. The practical importance of these observations needs no emphasis. It is the first solid experimental evidence to support the methods of treatment that clinical observation has already established.

It has long been assumed that the action of the pancreas upon carbohydrate metabolism is due to an internal secretion. There is much presumptive evidence in favor of this view. Transplantation and partial extirpation experiments can scarcely be explained upon any other assumption. However, it must be admitted that so far entirely satisfactory evi-

dence of the presence of an internal secretion has not been submitted. All evidence points against any sugar utilization in the tissues of animals with pancreatic diabetes and these results have been established likewise for severe diabetes in man. Whether this inability to utilize sugar resides in the tissues themselves or in some alteration in the sugar that is presented to them remains undetermined. Porges and Solomon found that after cutting off the circulation below the diaphragm of pancreatectomized dogs the respiratory quotient rose to one—indicating that sugar was then being burned in the muscles. They explain the constantly low respiratory quotient in diabetes by assuming that during the transformation of protein and fat into sugar, bodies with a very low respiratory quotient are formed and though sugar is burned in the tissues still these bodies hold the quotient down. Since the liver is the organ where protein and fat conversion into sugar occurs, eliminating the liver immediately raises the quotient to the sugar level. The main importance of this experiment is that v. Noorden gives it prominence in his latest theory of diabetes. However, the results of Porges and Solomon lose all value before the withering criticism of Rolly and David.

Pancreatic diabetes is the only experimental form of glucosuria that bears any similarity to the disease diabetes mellitus. However, a consideration of pancreatic influence by no means exhausts the possibility of carbohydrate metabolism for although the pancreas is the dominant regulator, other glands play a not insignificant role.

Blum in 1910 noted glucosuria after the subcutaneous and intravenous injection of epinephrin. Subsequent observations have shown that the glucosuria lasts as long as the epinephrin is present in the blood and that the degree of glucosuria is roughly parallel with the epinephrin concentration. Subcutaneous and intraperitoneal injections cause a more marked glucosuria than intravenous injections but a continuous inflow of very dilute epinephrin will establish and maintain glucosuria. After continuous or repeated injections glucosuria fails to occur although hyperglucemia persists. Epinephrin produces its most marked effect when a glycogen reserve is present but it causes glucosuria in starving animals, and increases the glucosuria at the height of pancreatic diabetes, and in human diabetes. However, if the pancreas and adrenals are removed in dogs glucosuria does not occur. It is said that under the influence of epinephrin the muscle glycogen disappears before the liver glycogen which is the reverse of all other forms of glucosuria. Although epinephrin causes glucosuria in fasting dogs, repeated injections lead to glycogen forma-

tion in spite of the hyperglucemia and glucosuria. This sugar is formed from protein and Eppinger, Falta and Rudinger have demonstrated an increased protein katabolism. However, Ringer and Lusk have been unable to confirm this observation. In contradistinction to pancreatic diabetes the hyperglucemia caused by epinephrin is associated with an increased combustion of sugar.

Similar to the effect of the adrenals upon carbohydrate metabolism is the action of the hypophysis. Injections of the extract cause glucosuria, increased protein katabolism and a rise in the respiratory quotient indicating sugar consumption. Cushing and his co-workers have shown that electrical or mechanical stimulation of the hypophysis causes glucosuria, followed by a period of decreased carbohydrate tolerance and that removal of the gland is followed by increased sugar tolerance and a tendency to put on fat.

Eppinger, Falta and Rudinger have given a prominent place to the thyroid and parathyroid gland in carbohydrate metabolism. In thyroidectomized dogs they find the protein metabolism reduced and the protein saving qualities of sugar and fat diminished; feeding thyroid again increases the protein metabolism and restores the normal protein sparing property of sugar and fat. The glucosuric action of epinephrin is lost but is again restored by prolonged thyroid feeding. In contradistinction to the effects of removal of the pancreas alone, removal of the thyroid and pancreas leads to no increase of protein metabolism; and the loss of weight of hungry animals is less rapid. In thyroidectomized dogs piqure fails to produce glucosuria. The parathyroids according to these authors have an action opposed to the thyroid. If parathyroids and thyroid are removed epinephrin produces glucosuria as normally, and the assimilation limit for sugar is greatly decreased. If the parathyroids alone are removed there is a great reduction in sugar tolerance and the protein metabolism remains unaffected. These results upon the influence of the thyroid and parathyroid upon carbohydrate metabolism have been severely criticised. Underhill and Saiki found that dogs with the thyroid removed tolerated little sugar subcutaneously, results which Eppinger, Falta and Rudinger insist are due to removal of the parathyroids with the thyroid. Underhill has produced epinephrin glucosuria in thyroidectomized dogs with two parathyroids remaining. On the other hand McCurdy finds that if the thyroid be removed and the parathyroids remain there is a permanently increased tolerance for sugar, and MacCallum's experiments indicate a reduction in the glucosuria of pancreatectomized dogs when the thyroid is subsequently removed.

In all experimental work in diabetes and perhaps still more strikingly in clinical observations the importance of a nervous element in glucosuria has been recognized. Claude Bernard showed that a stab into the floor of the fourth ventricle at the apex of the calamus scriptorius caused transient glucosuria. The results of piqure depend upon the glycogen reserve in the liver for if the liver be rendered glycogen free glucosuria fails to appear. The impulse from the brain to the liver is conducted through the sympathetic, for section of the sympathetic cord prevents glucosuria after piqure. Further, it has been found that section of the left splanchnic prevents glucosuria just as section of the sympathetic cord does. The left splanchnic supplies both adrenals. When the adrenals are removed piqure is without effect. This evidence implicating the adrenals as an essential link in the mechanism of piqure glucosuria is further supported by the observations of Stewart who finds an increased outflow of epinephrin from the gland after splanchnic stimulation and the histological studies of Kahn which point to increased activity of the chromaffin cells after splanchnic stimulation. Evidence from older experiments indicates that piqure is effective when all the nerves to the liver are cut but MacLeod and Pierce have shown that when the denervation is complete splanchnic stimulation only occasionally leads to hyperglucemia. Therefore, while epinephrin is apparently essential for sugar mobilization still these authors think splanchnic stimulation exercises a direct influence upon the liver. Of great importance are the studies of Cannon and his co-workers who find emotional states such as fright accompanied by an increased secretion of epinephrin and not infrequently with glucosuria.

The whole question of nervous glucosuria and particularly of the glucosurias associated with cerebral injury and disease needs revision in the light of Cushing's experiments upon the hypophysis. As he has pointed out the Claude Bernard piqure is very close to the hypophysis and puncture of the hypophysis has the same effect as the classical piqure. Stimulation of the superior cervical sympathetic ganglion causes glucosuria even if all possible paths of downward conduction are cut and even after connection with the central nervous system is destroyed by nicotine. When the hypophysis is removed stimulation of the superior cervical sympathetic ganglion fails to give glucosuria. A Bernard piqure will cause glucosuria even after transection of the cord above the emergence of the splanchnics. The general experimental evidence would indicate that under nerve stimulation the adrenals react more promptly than the hypophysis in producing glucosuria.

but that the latter gland may functionate in the same way as the chromaffin tissue does. What interrelation there may be in their function remains unexplained.

Time does not permit me to speak of von Noorden's recent theory of diabetes which is based upon his conception of the interaction of the endocrine glands. A fundamental part of the theory rests upon the experiments of Porges and Solomon which as I have stated were interpreted to indicate a normal combustion of sugar in diabetes. The demonstration of the fallacy of this conclusion has upset the theory. In the time remaining at my disposal I will briefly refer to the clinical significance of the influence of the endocrine glands upon carbohydrate tolerance.

Individuals normally vary in their response to alimentary tests of sugar tolerance but the range of variation is relatively small and any gross departure from the usual limits has an important clinical significance. A tolerance reduced so low that sugar occasionally appears in the urine upon an ordinary diet does not always mean diabetes. It is true that the distinction here requires the most refined clinical interpretation for diabetes no doubt usually begins as an alimentary glucosuria and passes gradually through the stage of glucosuria following starch ingestion and finally to glucosuria upon a purely protein diet. The importance of early diagnosis in diabetes I have sufficiently emphasized but the stress will bear repetition since there is every reason to believe that judicious dietary management will postpone and in some instances possibly avert later and serious stages of the disease. But occasional glucosuria should prompt us to review carefully all possible sources of carbohydrate metabolism derangement and a suspicion of disease of some of the endocrine glands may find considerable support from an estimation of the glucose tolerance. As a rule decrease of carbohydrate tolerance is accompanied by loss of weight and an increase by an excessive deposition of fat. Since the classical experiments of v. Bergmann and their clinical application by v. Noorden obesity has been divided into exogenous and endogenous or constitutional obesity. V. Bergman showed by careful calorimetric experiments that in certain instances of obesity the basal or hunger metabolism is greatly reduced. V. Noorden and numerous clinicians have pointed out that many cases of obesity fail to lose weight upon a diet that normally could not meet their energy requirements. In practice one cannot undertake respiratory experiments to detect these instances of endogenous obesity but when the condition is marked a simple dietary regime will give the clue. As a working basis we may allow that a normal individual at rest

requires thirty calories per kilogram of weight to maintain energy balance; out of bed with very little exercise forty calories. In such rough estimations one may omit any correction for the dynamic value of the food and may neglect estimation of the body surface. However, in very obese individuals the relation of energy requirement to weight is seriously disturbed but a reasonable standard of the energy requirement may be had by estimating the value for the normal weight of the individual. Thus, if a man five feet six inches tall weighs two hundred and ten pounds we estimate his rest energy requirement not at 3000 calories but at 2000 calories. Therefore, if such an individual refuses to lose weight upon a diet containing only 1500 calories or less, it is safe to assume that some factor other than simple superalimentation is at work. Instances of endogenous obesity are nearly always associated with increased sugar tolerance and while this change in carbohydrate relation is not necessarily the direct cause of the obesity, as witness the association of obesity with diabetes, some relation between the two does exist.

Of all the endocrine glands other than the pancreas the thyroid exercises the most significant control over metabolism. Hyperthyroidism is nearly always associated with an increased metabolism, emaciation and a lowered carbohydrate tolerance. Occasionally sugar appears in the urine on a mixed diet and epinephrin glucosuria is easily induced. Feeding thyroid to normal individuals or animals reduces sugar tolerance and occasionally leads to spontaneous glucosuria.

In myxedema the carbohydrate metabolism factors are the reverse of those in Graves' disease. The basal metabolism is reduced, sugar tolerance is increased and an accumulation of fat is strikingly characteristic. The tendency to epinephrin glucosuria is markedly reduced. Hirschel found in one instance no glucosuria after 500 grams glucose.

It must not be inferred that all instances of derangement of thyroid function fall regularly as regards sugar tolerance into one of these two groups. Such an inference would be opposed to all our clinical experience with disease of the thyroid gland. It is well known how irregularly the symptoms of abnormal thyroid function are grouped. Sometimes autonomic symptoms predominate, sometimes the two vary in different domains; hyperthyroidism may be followed by hyperthyroidism or the reverse; and not infrequently symptoms of hyperthyroidism and hypothyroidism may be conjoined. This variation explains why sometimes a clinical picture of predominating hyperthyroidism is associated with increased sugar tolerance, why an increased tolerance may be replaced by a decreased

tolerance or vice versa and how in rare instances diabetes is associated with outspoken symptoms of myxedema. Falta, who, as I have previously stated, regards the action of the thyroid as opposed to the pancreas function, believes that much of the irregularity that exists depends upon the functional range of the pancreas. If the range be wide the thyroid will influence carbohydrate tolerance but little, whereas if it be small the thyroid influence will easily be asserted.

The experimental work of Cushing has shown the intimate relation between hypophysis function and glucosuria and obesity. It has long been known that over-function of the pituitary is frequently associated with over-function of the hypophysis and the association of acromegaly and diabetes was commented upon by Marie. Barchardt collected 176 cases of acromegaly from the literature and found diabetes to be present in 63, and in 8 more alimentary glucosuria had been noted. Sometimes the diabetes is of a severe type and leads to death but more often it is a mild form and as v Noorden pointed out it may be characterized by a lack of correspondence between carbohydrate ingestion and sugar excretion.

Conditions of hypopituitarism, especially the syndrome of Frohlich, (*dystrophia adiposo-genitalis*), are associated with greatly increased sugar tolerance. In these cases the deposition of fat is a cardinal symptom and they offer the most striking illustrations of endogenous obesity. As Benedict and Homans have shown the general metabolism is decidedly reduced in contrast to the observations of Magnus-Levy, which indicates a heightened metabolism in acromegaly.

The relation of sugar tolerance to disease of the hypophysis shows great variation, just as it does in relation to disease of the thyroid. As a rule when other distinct symptoms of hyperpituitarism are present the tolerance is low, when other symptoms point definitely to hypopituitarism it is high. But as symptoms of acromegaly frequently culminate in a clinical picture of hypopituitarism, so glucosuria may be replaced ultimately by a high sugar tolerance, and during the transition stages the carbohydrate relation may vary from time to time. The absence of a constant relation between carbohydrate metabolism and hypophyseal disease, for instance, a high sugar tolerance associated with acromegalic features has proved an unsolvable puzzle to many clinicians. Indeed, Allen largely upon this basis denies the hypophysis any specific control over carbohydrate metabolism. However, that such apparent contradictions should exist must appear quite reasonable.

The only clinical complex associated with deficiency of the adrenals is Addison's disease. In this condition the blood sugar is usu-

ally low, epinephrin glucosuria is absent, and sugar tolerance is high. Emaciation is the rule but this is probably the result of the digestive disturbances rather than of deranged metabolism.

Conditions of hyperfunction of the chromaffin tissue have no sound clinical foundation. The attempt to associate the hypertension of nephritis with hypermephrinemia have not been fully successful. Instances of true adrenal diabetes are unknown although in this connection the following clinical history is of interest.

Med. No. 30365. White woman aged 35 years, entered Johns Hopkins Hospital December 29, 1911. Discharged Feb. 25, 1912. During previous summer had had polydyspnea and polyuria and diagnosis of diabetes was made. During the fall dyspnea and swelling of legs. The main points from the examination were: dyspnea and cough; edema of lower extremities; hypertension, 125 to 175 mm. Hg.; cardiac enlargement with signs of mitral insufficiency; enlarged liver; infiltration of upper lobe of right lung; urine contained small amount of albumen and casts, never sugar; functional renal tests indicated chronic passive congestion but no true nephritis. Patient left the hospital much improved but returned with the same symptoms and in much the same condition as at previous admission, on May 30, 1912. She again improved under treatment. She returned the third time on February 2, 1913, stating that in November she had become very weak, had polydyspnea and lost rapidly in weight. Sugar had again been found in the urine. During this admission besides the circulatory symptoms previously noted the urine contained a large amount of sugar which persisted upon a carbohydrate free diet. The patient developed symptoms of increasing acidosis and died quite suddenly on February 14, 1913.

Autopsy, Number 3874: Anatomical diagnosis: Adenoma of the right adrenal; metastasis to liver and lungs; dilatation and hypertrophy of left side of heart; cholecytolithiasis with chronic adhesive pericholecystitis, colloid cysts of the thyroid; encapsulated and calcified tubercles of right lung; chronic adhesive pleuritis (bilateral); chronic iritis and keratitis of right eye, acute bronchitis.

On the basis of these data it would be impossible to conclude that this is an instance of "adrenal diabetes." However, the persistent hypertension and cardiac hypertrophy without serious renal changes associated with transient glucosuria and ending finally in the clinical picture of severe diabetes and anatomically the finding of an adenoma of the adrenal gland is an interesting and suggestive combination. It is true that the last stage of the illness must have been a pancreatic

diabetes but may not the long continued hypernephrenemia have finally overcome the functional efficiency of the pancreas? This is the purest speculation, but speculation that has a fascinating interest.

I would like to emphasize one or two points with regard to the dietetic management of diabetes. Some year ago the only factor of importance was thought to be the restriction of carbohydrate. During the last five years the protein element in diet has received equal consideration. There are many instances in which the proper management of protein is just as important as carbohydrate restriction. In managing diabetes we have always to consider three fundamental problem:—glucosuria, acidosis and the state of nourishment of the individual.

As a rule increased carbohydrate tolerance is associated with obesity and a decreased tolerance with emaciation. However, it is very common to find mild forms of diabetes in obese individuals. Many of these instances follow habitual overeating and it is reasonable to assume that the pancreas function has gradually lost its full range under such long, continued overtaxation.

DISCUSSION:

Virgil E. Simpson, Louisville: I was not aware of the general trend of Dr. Hamman's paper, but he has given us a delightful talk, and if I am able to gather together a few threads from the experimental research work to which he has so lucidly called our attention and draw some practical deductions for our use at the bedside, I shall do so.

One of the lessons to be learned is, as I understand, from the research work to which he has called attention, that the diabetic body requires a diet of definite caloric value just as the normal body, and that in the adaptation of a diet suitable for a diabetic patient as determined by experimental work, eliminating carbohydrates largely or entirely, it must be borne in mind that the caloric value of carbohydrates thus eliminated must be exactly replaced by protein material plus fat. Secondly, it is to be borne in mind that sugar can be made from proteids. It is estimated that in four hundred grams of raw meat there are forty to fifty grams of sugar possible. In other words, the diabetic can continue to eliminate sugar as a glycosuria, that there will continue to remain an increased amount of sugar in the blood, a hyperglycemia, and this with the carbohydrate material absolutely removed from the diet, so that there is no cause for wonder in those extreme cases of diabetes in which the dietary regime is a rigid one in your judgment, that sugar elimination continues. It must be borne in mind that proteids can produce sugar. Fats, on

the other hand have been determined to have the lowest possible sort of sugar forming possibilities in your diet list, and therefore are of the greatest advantage and importance in the diet that you select for the diabetic patient.

Another practical thing to be borne in mind with reference to the clinical aspects of carbohydrate metabolism is the degree of tolerance to sugar; that is, the hyperglycemia decreases the degree of tolerance of the individual cell toward the utilization of sugar, and the good that comes from the withdrawal of carbohydrate material or sugar-producing food is largely one of relieving the cell for the time of the supply of material from which sugar can easily be made, allowing it to recuperate until the degree of tolerance is raised, so that after a time the diabetic can utilize a certain degree of carbohydrate food added to the diet which at the beginning of the management of the case would not have been possible.

Another practical point to be deduced from these experimental researches is found in the fact that the sudden withdrawal of all carbohydrate material in the diabetic patient may result in the rapid appearance of acidosis, followed by coma and death. Acetone and diacetic acid are derived from oxybutyric acid, and these can be overcome in one of two ways at the bedside. In the first place, by withdrawing the carbohydrates material from the diet gradually rather than abruptly, and thus avoiding this possibility and increasing the tolerance of the sugar of the individual cell; and, second, where acetone and diacetic acid are already present, follow with the administration of alkalies with the idea of overcoming the possibility of a fatal outcome. Sodium bicarbonate in gram or more doses, administered two or three times daily, will help to prevent the development of acidosis, not because the alkalies make the bodies more soluble and more easily converted, but because of the possibility of more ready elimination on part of the kidney as the eliminating organ of these structures.

The complications of diabetes mellitus are the result of the hyperglycemia and not of glycosuria. In other words, whatever complications occur in the clinical course of diabetes, are the result in the circulation of an increased and abnormal amount of sugar in the blood, and the mere determination of an increase of sugar in the urine is only one of the diagnostic means. While it is important to make an examination of the urine and determine the amount of sugar that is present all the time, we have come to recognize that there are other factors which may be elicited by a careful investigation of the output of a patient's renal system during the progress of the management of a condition of this sort that are helpful.

Louis Hamman, Baltimore, (Closing): I would like to emphasize one or two points with regard to the dietetic management which has been spoken of by Dr. Simpson. There was a time some years

ago when the only factor of importance in diabetes was thought to be the management of carbohydrate metabolism in the diet. During the last three or four years, just as important in many cases as is the management of the carbohydrate element in diet is the protein diet. There are many instances where patients get better with the proteins extracted or restricted, and nitrogen given with some carbohydrates. In the management of diabetes, where we have acidosis, we must maintain the influence of certain dietary, both nitrogen and energy equilibrium.

A third point we all know has been outlined admirably in Dr. Allen's article in the last week's issue of the Journal of the American Medical Association. He gives us valuable practical points, and really it may be a new idea in the management of cases of diabetes. He sets it forth in detail. I would urge you to read that article.

One of the gentlemen spoke of the usual association of decreased carbohydrate tolerance with emaciation and increased tolerance with great obesity. That is contrary to commonly recognized clinical association of obesity with diabetes. In all cases of diabetes, however, there is an alimentary factor and a metabolism factor, and in those cases it is quite possible, and in many instances it is true, these patients have been unusually large eaters and have taken large quantities of carbohydrates, and it is reasonable to assume that the functional capacity of the pancreas has been taxed to such an extent for a number of years that finally it gives way in a measure, and although these patients are fat sugar may appear in the urine. These cases are mild. We had an excellent illustration in a woman who weighed two hundred and fifty pounds. She had been a very heavy eater all her life. She indulged excessively in sweets. She had a small amount of sugar in the urine which was easily controlled by regulating the diet. It is reasonable to assume the function of the pancreas is so taxed it partially gives way and allows some sugar to appear in the urine.

GUNSHOT WOUND OF THE KNEE.*

By WILGUS BACH, Jackson.

On May 21st, 1914, I was called to see a little girl three years old, white, well nourished, and in perfect health, with the exception of a gunshot wound of the left knee.

She was shot while asleep at a range of two or three feet with a single-barrel, breech loading shotgun, twelve gauge, No 1 buckshot. The entire contents entering the left leg just below the knee, tearing away everything in front of the hamstring muscles from three inches below the knee up to the end of the femur with the exception of a spicule of bone about the size of one's little finger on the in-

ner posterior side of the tibia, this spicule had an articular surface with the femur and was held in position by parts of the capsular ligament. The patella was shot into many pieces, and all of the soft tissues were shot entirely away (in front of ham strings muscles) fragments of flesh and bones being lodged in the wall paper of the room.

I saw the patient in about 30 minutes, prepared her for operation in the home, and under ether, I removed every particle of loose bone all the powder burned fragments of flesh and skin, trimming the edges of the wound so as to have good skin to cover as much of the area as possible, I then removed all fragments of the patella, and found the fibula entirely shot away for 3 inches and all of the tibia shot away except the small spicule for about 2 inches.

The smooth articular surface of the femur was uninjured and almost entirely exposed. I dissected the skin and fascia from the front of the thigh and the front of the tibia to bring them almost together, nearly covering the area in front. The external side was not covered by skin, neither was the front after the fourth day as my ligatures gave way the skin retracted leaving a very deep, ugly wound.

The wound was dressed aseptically, and was kept moist with normal saline, dressings were done every day and granulations formed without scarcely a trace of pus in the wound.

The healthy granulations continued to form until June 24th, and I decided to try placental skin grafting, the area was about the size of a person's hand. I had it prepared and as soon as I delivered a baby for their next door neighbor I immediately transferred the placenta (in a sterile vessel prepared for it) to the wounded child.

The grafting was done, and within four or five days the entire surface of the wound began to assume a white or pearl gray color, and the skin formed rapidly.

The leg was kept in a box fitted to it, in an extended position and she has worn the box continually for four months.

At first she had some little shock, her temperature was about 102 for three or four days; coming down to normal by the end of the week, she suffered very little, had a good appetite and grew fat while unable to walk.

While there was a very small articular surface at the knee, I decided that the bone would form again, since the bone above and below were perfectly healthy and the ends were in apposition.

I also figured that in case a center of ossification should be located in this spicule, the bone would grow longer and larger and since the circulation was not seriously impaired the

*Read before the Breathitt County Medical Society

left limb would eventually become as large as the right considering the age of the child.

The procedure followed for skin grafting or placental grafting as we should call it, was carried out in the following manner.

A sterile jar was filled with luke warm saline solution as soon as placenta was delivered it was placed in this solution and immediately taken to the wounded child. The wound had bright red granulations, no pus or foreign substance being upon the surface, it was washed with saline and allowed to dry.

The placental membrane was removed and cut into strips about 1-2 inch wide extending the entire length of the wound, the strips were placed upon the wound nearly in apposition with the inner surface of the membrane resting upon the granulations.

Having the surface practically covered, I placed a wire netting around the leg so that no dressings or foreign body could come in contact with the wound or grafts. I could remove the dressings and watch the grafts, as the netting was arranged so that I did not have to disturb the wound. The grafts were moistened often with normal saline, being careful not to move them from their position. Within two weeks from the time of grafting, I had the entire wound healed, and put a splint upon the child and she is able to walk rapidly. The splint was made so as to relieve the leg of as much of the weight of the body as possible, at the same time immobilizing the knee joint.

The scar is filling rapidly and I hope to relieve her of the splint as soon as enough bone forms to make a substantial limb.

A NEW METHOD OF EXAMINING FOR MOVABLE OR FLOATING KIDNEY.*

By CURRAN POPE, Louisville.

It has been my experience that physicians do not, as a rule, examine with sufficient frequency for movable or floating kidney, in spite of the fact that a number of symptoms, both abdominal and nervous, would lead the diagnostician to look for this condition.

It has always seemed to me an anomaly for a physician to examine for a movable kidney with the patient lying down. About eight or nine years ago, I commenced to examine for movable kidney, first with the individual in a semi-sitting position, and, as I found less and less difficulty in diagnosing the condition, the present method was evolved.

With the abdomen bared (in women a sheet is thrown around the shoulders, covering the

abdomen like a large shawl or a special kimono) the patient stands directly in front of the physician, who is seated in a chair. The right hand, or fist, (if the right kidney) is placed upon the right rectus abdomen and sufficient pressure made to overcome any rigidity. The patient is then instructed to lean forward over the right shoulder of the examiner (for the right kidney) and the tissues between the abdominal wall and the back are grasped between the thumb and fingers of the left hand (for the right kidney). By assuming the standing and forward bending position, the kidney moves or descends downward and forward toward the abdominal wall. In this position it is more easily accessible to the examining fingers. The thumb and fingers gently grasp the kidney between them and are thus enabled to detect whether the kidney is movable or not, and the extent or degree of movability. In examining the left kidney the process is reversed.

In an examination of the literature and text books, I have been unable to find any description of this method. The nearest approach to the suggestion here made, is that of Suckling, C. W. (Movable Kidney, 1908). In Suckling's method, the patient stands erect and the examination is made (for the right kidney) from behind, the thumb being placed upon the back, and fingers used to palpate the abdomen. I have repeatedly tried this method, but find the one here suggested to be much superior.

In slender individuals it is possible, by this method, to make a most extensive and deep palpation: in many fat individuals with protuberant abdomens, I have found it the only way I could possibly reach the areas of the kidney movability. Viewed statistically and mechanically, there is no question but what the standing-forward-bending-position gives the best opportunity for reaching this deep-seated viscus.

Of the advantages that arise from a correct diagnosis of the condition, little need be said.

I am constrained to believe that neurologists should pay more attention to this form of lesion than they do at present.

Treatment of Decubitus.—Nordmann advises dry powders in treatment of decubitus unless there is much discharge when treatment as for any discharging wound is preferable. If there are complications or if the necrosis is extensive, nothing can compare with the continuous bath in treatment of decubitus. Not the least of its advantages, he remarks, is that the body floats to a certain extent in the water and thus further pressure on the region is avoided.

* Demonstrated before the Muldraugh District Medical Society, at Elizabethtown, April 14th, 1913, and Eagle Valley Medical Society, at Sanders, October 14th, 1914.

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EDITORIAL.

DR. B. W. SMOCK.

The personnel of a great organization like the medical profession of Kentucky, will be found to consist of almost every type of mind and body. Between the highly technical mind which equips our surgeons, internists, laboratory men, and the thoroughly practical brain which is the driving force behind our great general practitioners, there is usually a wide gulf. Happy is the man who has the brain and body force necessary to do his job. This was eminently true of Ben Smock. Small in body, delicate in frame, square as a die, true and loyal, he had exactly that sort of common sense which enabled him to accomplish real results. Dr. Smock was the first wholtime health officer in a rural district in the southern states. From the beginning his labors were so appreciated that he never received an adverse vote either from his local board of health or the fiscal court which furnished him financial support. Fortunate in having as his associates on the county board of health such men as Griffith, Wathen, Bailey, Baker, Allen and Weatherby, he had from the beginning such advice and backing from practical sanitarians that he was almost bound to succeed. It was under his administration that the dairy cows of Jefferson County were tested for tuberculosis, and Louisville became the first city in the United States which received its milk supply from cows absolutely free from this disease. This was his greatest work.

During the years to come Kentucky will have, we trust, hundreds of competent, devoted, consecrated health officers. In so far as work and responsibility are concerned, they can well take Ben Smock as a model.

THE STATE BOARD OF HEALTH.

Under the head of Official Announcements will be found the annual report of the Secretary of the State Board of Health. We trust all of our members will read this as it is a short but important review of work in which we are all interested. We especially desire that you will read the section on patronage. We wish all of our members could be present at a meeting of the State Board of Health, and could know how impersonally it attempts to manage all of these things. It is well for them to recall sometimes that where their first preferences cannot be appointed for the positions that they desire, that the State Board is not mixed up in local and technical politics, but is honestly endeavoring to choose between numbers of men usually of practically equal merit along lines that are well worked out and that will give to each community as good a local force as practicable. If you or your men were not appointed when you think they should have been, do you not think it would be right to give the man who was appointed the same chance, the same support, the same square deal that you would have expected him to give you had you been selected.

The most important action of the board provided for morbidity statistics in the counties which are ready for them. This means increased work for the county health officers as well as for the physicians of the state, as it means that each practitioner will report each case of preventable disease to his county or city health officer within twenty-four hours. Health workers and physicians have had for a long time the growing conviction that while we may teach sanitation in a general way to the leaders of public opinion by general lectures and the distribution of educational bulletins and that sort of thing, that the real practical education in preventive medicine could best be done in the neighborhood where someone was already sick. Of course the pro-

fession understands that this matter has been long under consideration. A large majority of the local boards of health have requested it. Every city health officer in the state has long realized the impossibility of reducing the sick and death rate until it was adopted. It will be put in effect in the various counties as rapidly as the county boards of health are able to take care of it. We will not be able to begin the work in every county in the state at the same time. We realize that each physician will be anxious to see it begin first in his community, but we have felt that it can only be successful in the counties where the health officer is paid a sufficient salary to enable him to really do the work which will be involved when the reports come to him. If you want your county to be one of the best on the health map of Kentucky, help to create the kind of support for your county health officer that will enable him to devote his time to his work and especially be sure that your senator and representative are fully informed as to the necessity for the passage of the Whole-Time Health Officer Bill.

DR. E. M. WILEY.

Dr. Edward Maxwell Wiley died at St. Joseph's Hospital, Lexington, on January 11, following an operation for hypernephroma of the kidney. At the regular meeting of the Fayette County Medical Society that night Dr. Redmon, the secretary, said:

"This afternoon this community was saddened by the news: 'Dr. Wiley is dead.' The sorrow falls heavily on the Society for he was one of us. He was an enthusiastic member. He has served as president, censor, and delegate to the State Medical Association, of which he was vice-president, and when called for a paper or for work, he was always willing to do his part.

He was a regular attendant and enthusiastic in all our endeavors; indeed, he was a true physician. To know him was to love him, and, though his chair is vacant, his memory will always be precious. I therefore move you, sirs, that all further business be postponed and that when suitable resolutions of respect have been drafted that we adjourn out of respect to his memory."

In our news columns the resolutions prepared by the committee will be found, but Dr. Redmon has summed up Dr. Wiley's life. He was a true physician. He was a real member of his county and state medical associations, and as such left an impress on both that will never be effaced. As a state official, he was capable and faithful; as a friend, he was true and loyal. From all who knew him, he will be accompanied to his final home with the

testimony that his work was well done and that he was a faithful servant of his fellow-men.

SCIENTIFIC EDITORIALS.

WHAT IS THE PHYSIOLOGY OF PIGMENTATION OF THE SKIN?

The dermatologist is very often confronted with this seemingly plain question, but in fact a difficult one to answer. While we know very little of the origin of pigment in the skin in normal health, we know that certain diseases, due perhaps to faulty secretion of internal organs, have a great influence upon the formation of pigment.

But what is the physiology of pigment in normal skin? This question can hardly be answered. Pigment is supposed to act as a protection against light. That the latter increases the power of formation of pigment has been shown by many experiments. Giem's and experiments of other investigators have shown that pigment plays a great part in preserving the deeper tissues from the deleterious influence of light. Pigment absorbs chemical light rays that are liable to cause inflammation, while the non-injurious red, yellow and green rays penetrate the tissues without change or injury to the latter. Bie claims that in the cities the pigment is deposited in form of small yellowish nuclei and the latter protects the small nerves and blood vessels.

Diesing sees in the limited pigmentary areas a substance analogous to plant chlorophyll which biochemically binds the sun's energy. Chiais, according to Rollic, holds pigment to be an accumulator of the sun's energy? According to his opinion, animals with dark skins, infected with protozoa, withstand and live longer after the extirpation of adrenals. However, Halberstadter, after having infected certain animals with trypanosomes, could not agree with Chiais.

Rollic noticed in sanatorium for the treatment of tuberculosis, that under heliotherapy, pigmentation of the skin and gradual recovery from tuberculosis went hand in hand.

Darwin noticed that the color of the skin and hair is often found in connection with its resistance to certain plant poisons and infectious substances. Hence, he was able to explain the origin of color in negroes and other colored races, by the fact that dark individuals in the course of many generations became rather immune to epidemics prevalent in their land, while the white individuals succumbed, and that is why the dark color became dominant. In one epidemic of measles in a sanatorium, where tuberculosis was being treated with heliotherapy, it was no-

ticed that the pigmented places were free from measles.

In the tropical countries the inhabitants have a skin of a darker color in the zones which are poor in vegetations and trees and where the chemical action of the sun's rays are stronger. In the zones, where the influence of the rays of the sun is softened or modified by plants, the inhabitants have a lighter color. Exposed places of the skin of animals and human beings are more pigmented than the skin protected by clothing or hair. Intensified light always leads to intensified pigmentation of the skin. That accounts for the fact that on the dorsal side of the body pigmentation is more pronounced than on the ventral.

Bic claims that a solar or a glacial burn usually spares the pigmented areas. Animals whose skin is spotted or striped, the burn usually affects the areas which have no spotted places or stripes. The eyes, ears, mouth, nipples of the breast and privates are very sensitive to the action of the rays and hence, they are usually more pigmented. The hyperpigmentation of these parts is due to the constant exposure to the rays during many centuries. On the other hand, the skin of negroes gets paler if they have lived long enough in the northern parts, where the rays of the sun are not so strong and not so constant.

According to Pitchford, the office of pigment is to defend the inner tissues from the injurious effects of light. Lack of pigment accounts for the prevalence of cancer in the white races. The face which is mostly exposed to the sun's rays, is very often found to be the seat of cancer. The increase of cancer in cities is accounted for by Pitchford as partly, through transformation of the dark narrow streets into wide ones brilliantly illuminated, and partly, to the thin clothing now worn by the people.

But it seems to me that Pitchford's assertion is not based upon scientific facts and needs more proof.

From all opinions and theories stated above we are bound to acknowledge that the physiology of pigment formation is not yet fully understood. It is an extremely interesting study and full of scientific surprises.

M. L. RAVITCH.

Quickened as Possible Typhoid Carrier. — The work done by Mitchell and Bloomer seems to show that the chicken is highly resistant to the typhoid organism. It not only fails to take the disease, but also it cannot be made a carrier either by feeding the organism or by intravenous inoculation.

OFFICIAL ANNOUNCEMENTS

ANNUAL REPORT OF THE STATE BOARD OF HEALTH.

In many respects more has been accomplished in public health work in Kentucky during 1914 than in any previous year. The outlook for the future is full of hope for marked lowering of our sick and death rate from the preventable diseases—an outlook which can be realized only through harder and more consistent work on the part of those now devoting their entire time to this end, but it will also be found necessary to gradually increase the numbers so engaged until a sufficient force is in the field constantly to educate, not a part—but all of the people everywhere—in the simple lessons of such correct living as we now know to be essential to secure an increase in the average longevity as well as to increase the average of human efficiency during life by having less sickness.

As the income and personnel of our force is increased from time to time the Board is confronted with the increasingly perplexing problem of patronage and it seems to me proper that we reaffirm the principles which shall guide us and our officers and employees in the selection of such appointees as are found necessary in our several departments. Most men in Kentucky are either democrats or republicans. This fact, nor unusual ardor in the support of their respective parties, has never been considered as one of the qualifications necessary for an effective sanitarian. Neither should the fact that one is a republican or a democrat be a bar to his appointment if otherwise qualified. In fact, our standard should be neither partisan, bipartisan nor nonpartisan; it should be absolutely regardless of party affiliation and based solely upon efficiency. In pursuance of this policy in the selection of local registrars of vital statistics to fill the vacancies caused by the expiration of the terms of the 2500 incumbents, Dr. Heizer first commissioned all of the old officials who had been efficient. In every district where the registration of births fell below 90% he sought some man or woman who was willing to do the actual work involved for the slight compensation the law allows and who was peculiarly fitted by education or experience to keep such records accurately. The local registrars are paid by the counties and are, under the ruling of the Attorney General, combined county and state employees. It has therefore been deemed wise to select both city and country registrars upon the one standard of effective service. It is with pleasure that I am enabled to report that Dr. Heizer found it necessary to appoint less than thirty new

registrars and that practically all of these were in the cities. In this connection, I desire to approve the recommendation of our very efficient State Registrar that he be directed by the Board to bring to the attention of the county attorneys every violation of the Vital Statistics Law. It has now been in operation four years and only the negligent, the malicious or the ignorant can now fail to understand its importance or its requirements.

Under our laws, as construed by the courts, the local board of health is the legislative, executive and fiscal authority of the county in health matters. The only exception to its fiscal authority is the right to fix the salary of the health officer which is reserved to the Fiscal Court, and the courts have held that this salary must be a reasonable compensation for the work involved. The local board elects the health officer and has the power of removal at any time for cause. With those broad powers and real duties, this Board has heretofore conceived it to be its duty to select as members of the local boards three competent physicians who can be depended upon to select as health officer an effective man who will give at least as much service as his Fiscal Court will pay for. The time has come when neither this Board nor the local boards should longer temporize with the people's health and lives. After consultation with other State Boards and with the Surgeon General of the United States Public Health Service, and upon the advice of attorneys, I have formulated additions to rules and regulations we are authorized by law to adopt which will provide for the immediate report to the county or city health officer of all cases of preventable sickness and that prompt steps be taken by that official, in cooperation with the family physician, to prevent the spread of disease. In this way, education will be done where it is most needed—in the immediate environment of the sick—and the lessons of health can be learned most quickly where their reasonableness and necessity are most apparent. At the beginning in the few counties where the Fiscal Courts are composed of ignorant men, it will doubtless be necessary to appeal to the higher courts to secure reasonable compensation for the additional labor and responsibility involved. In most of our counties the competent laborer in this great field will be adequately rewarded provided he actually "delivers the goods" by making the people realize that he can teach them how to prevent much ordinary sickness.

We have operated for the past four years under the bureau system and it has been found most satisfactory, but I desire to suggest a readjustment of the work so as to recognize the admirable system of cooperation

which has been the Board's greatest asset in its work.

The Executive Department is the administrative office and is in charge of the Secretary who is the executive officer of the Board. He has a chief clerk, stenographer and cashier.

The Bureau of Sanitation shall be under the supervision of the chief sanitary inspector, and besides this officer shall consist of a consulting sanitary engineer, an assistant sanitary inspector, an analyst, a stenographer and one or more assistant analysts. This Bureau to have charge of water and sewage work, sanitary inspection and engineering.

The Department of Preventable Diseases shall be under the supervision of a Director who shall also act as epidemiologist. It shall consist of a Bureau of Epidemiology and a Bureau of Bacteriology. The latter shall consist of the State Bacteriologist, a microscopist, stenographer, clerk, janitress, and an assistant in charge of the Pasteur treatment for rabies. The Director of this Department shall collaborate with the Chief of the Bureau of sanitation in such sanitary surveys as are necessary in epidemiologic work.

The Bureau of Vital Statistics shall consist of the State Registrar, Correspondence Clerk, Certificate Clerk, Statistician, bookkeeper, stenographer and two card clerks.

The proposed change will involve very little increase of expense, is any. It is with much pleasure that I submit a proposed detail of an officer of the United States Public Health Service to Kentucky who shall "collect morbidity reports and other sanitary information, to observe the operation of interstate sanitary measures, to investigate outbreaks of communicable diseases and to cooperate with this Board in the enforcement of state and federal regulations to prevent the spread of contagious and infectious diseases in interstate commerce." Such a detail will relieve this Board for the present of the necessity for providing a Director for the Department of Sanitation. I would suggest that the Secretary be directed to act as such with the cooperation of an officer of the United States Public Health Service.

The report of the Bacteriological Laboratory indicates a healthy growth and increased usefulness. In 1911, 2060 specimens were examined. In 1912, 3914. In 1913, 5446. In 1914, 6153. This does not include examinations of feces for hookworm and other ova, of which 98,622 were made last year and 121,569 in the preceding three years. In a private laboratory a very proper charge for such examination would have averaged two dollars each, but at one dollar each the work of this Laboratory alone has earned the entire appropriation for the Board.

In the past year this Laboratory, in cooperation with the Hygienic Laboratory at Washington, has treated 165 persons with the Pasteur treatment for the prevention of hydrophobia. In the previous three years, 151 persons were treated. The cost to these afflicted people has been nominal—railway fare and board. In private institutions the charge for similar treatment is properly put at from \$200 to \$500. At an estimated value of only \$100 each this activity alone has been worth two dollars for every dollar the laboratory has cost. Through the physicians of the State, diphtheria antitoxin, having a retail value of \$7562, has been distributed to those in need of it at an actual cost of \$2383.80, or a saving to the sick people of \$5178.20.

Valuing the examinations made in its two laboratories alone at from 1-2 to 1-4 of the ordinary charges in private institutions, in the four years of their existence they have earned \$313,592.00 or a yearly average of \$78,374.00 while their yearly average cost has been about \$12,000.00. If this were a private corporation, the stockholders would consider the management to be excellent. Every citizen of Kentucky is a stockholder! Our dividends are in good red blood—the health and lives of our citizens—and not in dollars; and I am confident we will receive the hearty approval of the people.

I regret that the sum of \$1,000,000 generously appropriated for the Rockefeller Sanitary Commission for the Eradication of Hookworm Diseases in the South has been exhausted and that it has discontinued work in Kentucky. It is of interest that in three years 220,191 of our citizens have submitted specimens for examination for this disease. More than half of those examined have been found to harbor some parasite and 69,685 of them have shown the presence of hookworm infection and have been treated without one cent's cost to the State Treasury.

I desire to express appreciation of the continued cooperation of the State Tuberculosis Commission. We have examined 3597 specimens for tuberculosis in 1914 as against 3165 in 1913. This increase has been largely due to its activity. The opening of three county sanatoria this year and the placing of a number of community nurses by the commission should largely increase the practical value of the Laboratory to them.

In 1914 our Water Laboratory has made exact analyses of 1439 water supplies from almost every county in the State. As an indication of the increased interest of our people in health matters, it is to be noted that 19 more analyses were made in this one year than in all the preceding three years. Through lack of primary and elementary knowledge as to the methods of the spread and growth of

disease seed or germs more than half of our people have permitted their drinking water, as these careful analyses have proven, to become so contaminated with the filth of their own bodies or with manure from animals entering wells or springs from the polluted ground surface as to render it unfit for human consumption and many water supplies, both public and private, are ideal distributing points for the scattering amongst our people of disease germs.

I am glad to announce to you the partial restoration to health of our most efficient State Sanitary Engineer, Prof. E. H. Mark. Splendidly trained and equipped, thoroughly competent, a great educator and leader, diplomatic yet forceful, Prof. Mark has proven himself one of the most effective of state officials, and, in order that the State which delights to honor him and which he serves so well, may continue to avail itself of his distinguished services, I desire to suggest that he be continued as a sanitary inspector to be designated Consulting State Sanitary Engineer.

A recent order, promulgated by the United States Public Health Service that no water shall be available for drinking purposes upon any railway which has not been shown by analyses to be safe, will tax the resources of the Board to the utmost during the next two years. Several thousand specimens must be examined. Prof. Mark has found it necessary to secure an additional expert water analyst, and, upon the recommendation of Prof. Sedgewick of the Massachusetts Institute of Technology, I present the name of Mr. George B. Zimmele for that position.

The Bureau of Vital Statistics presents a continued record of efficiency. Its report for 1914 will be ready for publication shortly. In order that the statistics to be secured from the accurate registration of our births and deaths may be more quickly available to our health officials and people, I recommend the addition of such tabulating machinery as has been found useful, and that the Registrar send the monthly report from each county and from the State to every newspaper interested. In this way, these statistics showing the enormously high and wholly unnecessary sick and death rate will be constantly placed before the reading and thinking people, who are the readers of the newspapers, and I feel that no other thing will contribute so much to an increased interest in public health.

I desire to call to your attention the visit of Dr. J. O. Carson, of Bowling Green, to Butler County, where he made a survey of the schools for trachoma, and his excellent report.

In addition, and with the firm conviction that every increase in literacy means an increase in healthfulness, I recommend continued and greater interest in the remarkable

campaign for the eradication of illiteracy in Kentucky being so ably waged under the leadership of Mrs. Cora Wilson Stewart, and that all of our health officers be urged to join in their respective county campaigns.

Actual death certificates indicate a high death rate in Kentucky from whooping cough, measles and diphtheria. In three years there have been 22,150 cases of whooping cough and 443 deaths; 15,050 cases of measles with 301 deaths, and 629 deaths from diphtheria. I recommend that the Chief Sanitary Inspector be instructed to prepare and distribute bulletins which will show that sickness and death from these diseases is unnecessary and avoidable and that a second case of either of them in a community is due to some one's neglect—usually ignorant, but practically always in violation of the rules of this Board and the plain lessons of common sense. I also recommend that he prepare a Bulletin on school sanitation which will enable our teachers to give the children of the State—its greatest asset—at least as much sanitary care as the law requires for dairy cows!

I note with much pride that the counties of Bell and Jefferson have provided whole time health officers and that both have in preparation painstaking surveys of their counties so they may know exactly where immediate work is most needed. In these counties the sick and death rate should be reduced from year to year or it will indicate the uselessness of health work. Tremendous responsibility rests upon the health officers, and, if they succeed, as we confidently expect them to, our dream of an active, competent, whole-time health officer in every county in the State will be realized within a few years. We need no other standing army, but it is our ambition that every well-wisher of Kentucky and her people may enlist under the local leadership of consecrated, competent health officers to save our people, not to destroy them!

Anesthesia in Gynecology.—In this third part of his article Schlimpert describes his study of general anesthesia from nitrous oxid, comparing the various technics in vogue alone or combined with other anesthetics. Until recently it has had very little vogue in countries other than the English-speaking, but laterly has been taken up with new interest in other lands. His extensive experience with lumbar anesthesia has convinced him that even with the most painstaking technic we must reckon with a certain proportion of refractory cases and a certain number of cases with persisting after-headache.

ORIGINAL ARTICLES

SYMPOSIUM ON NERVOUS DISEASES

TREATMENT OF THE MOST FREQUENT DEFORMITIES FOLLOWING INFANTILE PARALYSIS.*

By W. BARNETT OWEN, Louisville.

The amount of human wreckage caused by anterior poliomyelitis is worthy of our serious consideration. The fact that we are unable to cure the disease, at the present time, is no reason for not attempting to make a useful, self-supporting individual out of one who would otherwise be a helpless, hopeless cripple.—a burden to himself and the community. In the great majority of instances this can be done.

In this paper I shall not discuss nor even enumerate all of the various deformities resulting from this disease, but will briefly consider some of the most common and most disabling.

In the vast majority of cases the deformity consists of either partial or complete paralysis of the lower extremities, one of which is complete paralysis of the quadriceps muscle, which of course renders active extension of the leg impossible. By transplantation of the biceps tendon into the patella it has been possible to successfully overcome this deformity. In performing the operation great care should be exercised, even by the most competent operators, to thoroughly isolate and protect the external popliteal nerve, which on several occasions has been accidentally divided with resulting paralysis of the peroneal group of muscles.

Tendon transplantation was first performed by Nicoladoni, in 1882, for the relief of paralytic calcaneus. Since then Parish, Drobink, Goldthwaite, Gibney, Whitman and other prominent surgeons have obtained excellent results from this operation. However, tendon transplantation is indicated only after the final degree of paralysis has been definitely determined, using only such muscles and tendons as have sufficient strength, or it seems reasonably certain can be gradually developed, to do the required work. For instance, it would be poor judgment to expect "a man to have the pulling power of a truck horse."

The essential points as to technic of tendon transplantation and after care of the patient are briefly as follows:

- (1). Always strive for perfection in asepsis.
- (2). When the tendon is of sufficient length it should be passed through a hole drill-

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ed in the bone; if not long enough, include the periosteum when detaching the tendon from its original insertion.

(3). Remember that the results are most favorable when the tendon is transferred through the bone; the next best plan is to transfer a small piece of bony attachment to the new point of insertion; the results of one tendon transferred to another are less favorable as there is too great likelihood of stretching.

(4). The tendon should be dissected free for a considerable distance that its new course may begin as high as possible, and thus avoid working at an acute angle; its action must be made as nearly normal as possible.

(5). Silk seems to be the suture of choice, although in many instances it is believed an absorbable suture may be preferable.

(6). The member operated upon should be placed at rest for at least six weeks, in a slightly over-corrected position, to prevent strain until the union is firm.

(7). Great care should then be taken in the practice of active motion, and a convalescent splint should be worn until muscular development is sufficient in the new position.

(8). In addition to tendon transplantation the production of arthrodesis is frequently of great assistance, thus partially stiffening the adjacent lax and insecure joint.

Talipes calcaneus, caused by paralysis of the calf muscles, is another disabling deformity which can in the majority of instances be corrected and a useful foot secured by means of the operation recommended by Whitman and others. This procedure has given such universal satisfaction that it is now adopted as a routine measure in all such cases, viz., astragalectomy with posterior displacement of the foot at about five degrees equinus. The peroneus longus tendon is cut about three inches from its insertion and then dovetailed through the tendo Achilles, the ends being carefully sutured which reinforces the foot in its backward position. A strong and serviceable foot which continues in development may be thus secured.

Another deformity of frequent occurrence is paralytic equinovarus. If the paralysis is too extensive to be benefitted by transplantation, tendon fixation may be practiced as recommended by Gallie, of Toronto, the following technic being employed: A longitudinal incision about three inches long is made over the external malleolus; the peroneal tendons are exposed and lifted from their sheaths; a two and a half inch incision is made in the periosteum which is retracted; the bone is then removed for the same length as the periosteal incision and the thickness of the tendon to be transplanted; the tendons are drawn taut and placed in this trough, the periosteum

being carefully sutured over and to them. For this purpose chromic catgut is used. This operation can be done as prevention and correction of many deformities and is especially indicated as prevention of calcaneus. The patient is able to bear the body weight upon the ball of the foot, raising the heel from the ground, thus greatly improving the gait. The first operation of this kind was performed about two years ago. Gallie (*American Journal of Orthopedic Surgery*, July, 1913) reports ten cases, the patients varying in age from two to thirty years. The results thus far have been entirely satisfactory. Many other surgeons are now performing the Gallie operation and have reported favorable results.

For the correction of the deformity known as clawfoot, which I believe is usually the result of infantile paralysis, transplantation of the extensor proprius pollicis to the neck of the first metatarsal bone is now being successfully practiced. In this deformity there is not only a marked shortening of the extensors, but also of the plantar fascia. After subcutaneous plantar fasciotomy a horse-shoe incision made upon the dorsal surface of the foot is carried to the extensor tendon, and a flap containing all the tissues superficial to this is reflected upon the dorsal surface of the tarso-metatarsal articulation. The long extensor tendon is then detached from the phalanx and transplanted into the neck of the metatarsal bone. In aggravated cases, if this operation does not successfully correct the deformity, a cuneiform osteotomy through the dorsal surface of the metatarsal bone is recommended.

To illustrate how serious the results of claw-foot may be, the history of one case observed three years ago at the Louisville City Hospital will be briefly related. The patient was a male aged thirty-five years, the deformity having developed twelve years previously as a result of infantile paralysis. No treatment was instituted until he became unable to walk, and at that time there was an extensive bony necrosis originating in the first metatarsal joint caused by pressure. The man was exceedingly heavy, and practically all of his weight was thrown upon that portion of his foot. Necrosis developed rapidly, and the extensive burrowing of pus into the body of the foot had caused such destruction of the bony and soft tissues that amputation of the foot became necessary to save the man's life. Had this patient been seen early and treated according to the method just described, I am quite sure amputation could have been avoided and a serviceable foot preserved.

IN CONCLUSION.

Under no circumstances should a patient with infantile paralysis be permitted to go

untreated, as prevention of deformity is far more important than allowing it to progress, and then later by radical means expecting to correct it. For instance, if a child with paralysis of the peroneal group of muscles,—the internal group being normal,—is allowed to go without protection or support, the healthy internal muscles rapidly develop and contract thus forcing the foot into a varus position, because there is no resistance from the paralyzed external muscles. The smaller bones of the ankle and foot develop in an abnormal attitude, thereby markedly changing the normal osseous relationship. If the limb is properly supported, deformity is prevented from progressing, and even if later it becomes necessary (which it most likely will) to practice tendon transplantation, the bones are normal as to both size and relationship. It is then only a question of the proper support being transferred from braces to healthy transplanted muscles, or power restored by whatever other operation may be selected as most suitable.

I desire to reiterate one fact which is sometimes overlooked and is considered of great importance, viz., that completely paralyzed muscles from infantile paralysis always remain so. Partially affected muscles, however can be developed greatly by scientific active motion personally supervised by one who is thoroughly familiar with the conditions. When the parents are advised to "simply let the child run for a while and develop the paralyzed muscles," it means that those completely paralyzed are not benefitted, and those partially affected may be overtaxed thereby losing much strength which could be retained and developed.

Nerve grafting has hitherto not proven satisfactory, although in the future there may be much accomplished in this direction.

THE DIAGNOSIS OF PARALYSIS IN CHILDHOOD.*

By JOHN J. MOREN, Louisville.

The subject assigned to me is a very broad one and it will be impossible to refer to the many diseases resulting in paralysis. Therefore, I will limit my remarks to the general discussion of paralysis with report of cases. The title assumes that paralysis exists and it is our aim to recognize the type and locate as far as possible the site of injury. Let it be understood that there is no difference in paralysis of childhood and that seen in adult life. The difference arises in the frequency of the various types at certain ages. Some are found so frequent in early life that they are

termed infantile, due largely to the fact that certain causes are more liable to do injury at this age. Nevertheless, such clinical pictures are seen in adults. Disease resulting in the destruction of certain areas of the nervous system will produce the same symptom group. One disadvantage in the child is that we lack the help of the patient to interpret the character of the symptoms. Consequently, we have to rely upon the history as given by the parents and our physical examination. One fault in the average practitioner which I have noted is his difficulty in finding and grouping the symptoms of nervous diseases. This is no lack of ability in the man, but due to his limited clinical experience. Should he treat and study as many cases of paralysis as he does of typhoid he would be as good in nervous as in general diseases. Nerve symptoms are a manifestation of a diminished, loss or altered function and the consequences thereof. Many symptoms may appear but it is essential to detect and group symptoms which show certain areas are affected. It is particularly essential to know the value of a symptom associated with other different symptoms.

Loss of tendon reflex is found in Tabes, neuritis, anterior poliomyelitis and muscular atrophy; exaggerated reflex is found in cerebral paralysis and neurasthenia, but other characteristic symptoms of each disease makes a different interpretation of the loss or increased inflex. This holds true with any symptom of disease or disorder of the nervous system. We can have loss of motion or paralysis from destructive lesions in the brain, cord, nerve or muscle. Each injury will produce its characteristic symptom group and cause one of the two types of paralysis; (1) flaccid, without tone, flabby, relaxed; (2) spastic, increased tone, stiff, rigid. The normal muscle tone is maintained by the impulses from the nutritive centers in the cord and controlled by the cerebral centers. Lesions limited to the brain do not affect the nutritive center only the controlling, inhibiting, the initiative of motion. Therefore in such diseases the cord functions remain but there is no control, consequently an over-action of some functions of the cord will be manifested, especially the reflexes, which has much to do in producing the spastic condition. Injury which does not completely cut off the cortico-spinal connection leads to spastic paralysis from irritation of the sclerotic tissue formed after the initial injury. A typical picture is the flexed and stiff arm following a stroke of apoplexy. Lesions of the nutritive centers of the cord results in loss of reflex and atrophy of muscle, a flaccid paralysis. These two forms of paralysis are characteristic of the upper and lower neuron disease.

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Sometimes we have flacid paralysis following brain lesions; for instance, in the initial stage of apoplexy and monoplegia of cortical origin. A good per cent. of apoplexies remain flacid, but the reflexes are present and active. Having determined the presence of spasticity with increased, or flacidity with diminished or loss of reflex, we look for other signs to confirm our opinion. The following case reports will bring out some special points in the various clinical types of paralysis:

CASE I:—Boy, 7 years of age, had a left flacid hemiplegia. The onset was sudden and accompanied by some general aching and malaise. All reflexes in the leg were normal, the wrist jerk was normal, no bladder or rectal signs, no cranial nerve involvement, no sensory disturbance. The muscle of the leg felt firm and I assumed the arm muscles were normal. The case was somewhat a puzzle, as it appeared such a typical hemiplegia. I reserved my diagnosis on account of the absence of the planter extension reflex, Babinski's sign. In a few days the paralysis disappeared from the leg and lower arm, leaving only a flacid paralysis of the shoulder group of muscles. The case proved to be anterior poliomyelitis, upper arm type, with typical R. D. and atrophy of the muscles. My mistake was neglecting to test for the bicep and tricep reflex. These were lost and should have been detected. I mention this case to illustrate our mistakes and how we may be misled by overlooking a single reflex. This case also illustrates the value of the planter extension reflex or Babinski's sign. When absent you can rule out lesions affecting the cortico-spinal motor neuron from the leg center. I have never been misled by this sign. In this case we might consider the possibility of a cerebral monoplegia, especially as the brachial group of muscles suffer most. But the reaction of degeneration rules out cerebral origin and establishes a lesion of the lower motor neuron. In all monoplegia of cerebral origin I have seen, there has been more or less disturbance of sensation. You will recall that sensation and motion are intimately related in the cerebral cortex and each suffer in isolated cortical lesions. The absence of sensory signs in the above case enables you to farther exclude cerebral origin. The atrophy in cerebral paralysis is from non-use, consequently is never complete, while in anterior poliomyelitis you have true muscle atrophy which may become complete in the muscles affected.

CASE II:—A girl aged 6 was at a picnic and for some reason carried her baby sister for some distance. In a short time after sitting down, she complained, in a child language, "My legs feel so funny."—they tingled. On attempting to walk she noted one leg would not respond as usual. Within 24

hours there was a total paraplegia and complete anesthesia extending from about the naval. Urine was retained, but at times there would be an involuntary evacuation. Several days later the legs were slightly flexed and stiff, but could be flexed and extended by force. The reflexes were exaggerated and Babinski's sign was present. She developed the most extensive bed sore I have ever seen. In the course of six to eight months the child died. The diagnosis was hemorrhage in the eighth and ninth dorsal segment of cord. Such is the history of a transverse lesion of the dorsal cord. This case illustrates two points: First, when the sensory tracts are involved, especially of the cord, watch for bed sores. They do not occur, unless from neglect, when the motor tract alone is affected. Second, transverse lesions above the lumbar enlargement of the cord produces a spastic paraplegia and anaesthesia with exaggerated reflexes and Babinski's sign. The muscles supplied by the affected area will show atrophy, R. D. and loss of reflex.

Sudden onset without pain excludes Potts' Disease. Multiple neuritis causes flaccid paralysis, loss of reflex, the bladder is seldom involved, anaesthesia rarely effects the trunk. Age and season suggest anterior poliomyelitis, but in this disease paraplegia is uncommon, it is strictly motor and sensory symptoms are absent, bed sores never occur. Transverse lesions of the lumbar cord causes a different picture. Flacid paralysis, loss of reflex, incontinence of urine and feces, anaesthesia, muscle atrophy. In these cases the nutritive and reflex centers for the legs as well as the sensory tracts are destroyed.

CASE III:—Quite a different picture was presented in a girl 6 years of age, who claimed that she could not use her legs. There was indefinite and diffuse pain in the back and lower extremities, especially on attempting motion or when her mother tried to move or handle the legs. All reflexes and sensation were normal. As long as she was allowed to remain comfortable and satisfied in her baby buggy, all was well. When bed-time came, there was war. The more the mother did and the more members of the family who rallied to her aid, all the more pain was complained of. This case shows that hysteria can occur in the child, and illustrates that characteristic clinical picture found only in hysteria, namely, their most consistent symptom or sign is the absolutely inconsistency of the whole symptom group.

CASE IV:—A girl, aged 17 years, gave the following history: Has suffered from fine intentional tremor of the hands since the age of 6. The tremor followed an attack of rheumatic paralysis of the legs. Her mother is very nervous and suffers from a similar tre-

mor of the hands. Examination showed no evidence of any paralysis. She was a normally built girl. Rheumatic paralysis in such histories is very uncertain. I do not know of such a type of paralysis. Doubtless it was a case of hysteria.

CASE V:—A girl 10 years old could not play like other children. She was noted for stumbling and could not keep up with her playmates. In the course of one or two years her symptoms had increased until she could not arise to the erect posture without help; there was a positive muscular weakness in the muscles of the back and legs. The mother noted wasting of the muscles in back and hips, but the calf muscles seemed to be increasing in size. Physical examination showed no sensory or vesical symptoms, the reflexes were present, but diminished. The atrophied muscles felt flabby, but the calf muscles felt hard and doughy and were much larger than a muscle would be at her age and build. The muscles did not respond actively to the electric current. The patient's older brother passed through the same history and at this time was a helpless cripple, all of the muscles of the back and extremities had wasted away. Mentally the boy was all right. This case illustrates two points: first, the value of the family history in Pseudo-hypertrophic muscular atrophy; second, in loss of motion from muscle atrophy the paralysis follows and is in proportion to the degree of loss of muscle tissue. The reaction of the muscle to the electric current will also be in proportion to the remaining muscle fibres.

CASE VI:—A boy 14 years old had typhoid fever. When he convalesced there was noted a left foot drop. The parents became anxious as it had been suggested that the case was one of spinal paralysis. Examination revealed a V shaped area of anaesthesia extending over the front of the foot and slightly above the ankle and a typical R. D. in the anterior tibial muscles. All reflexes were natural. Recovery proved the diagnosis of neuritis. Individual nerve lesions cause limited paralysis and anaesthesia. It would be impossible to have a cord lesion that would result in paralysis, and anaesthesia in the distribution of the anterior tibial nerve. Anterior poliomyelitis is never accompanied by anaesthesia.

CASE VII:—Note the contrast in the following case: Child age 5 complained of backache and pain in knee of left leg. The child was sick, fever 101, the leg was exceedingly hyperaesthetic and refused to let its mother rub or move the leg. In three to five days the child was much better, pain disappeared, but there was left foot drop. The examination showed wasting in anterior tibial group of muscles with R. D. No anaesthesia.

Diagnosis: Anterior Poliomyelitis. This case did not get well. In early stages of neuritis there is always more or less tenderness along the course of the nerve. The anaesthesia is superficial, touch and pain sense suffers most, but deep pressure will always be recognized.

Individual nerve lesions should offer no difficulty. Their symptoms are restricted to the limit of distribution of the nerve. When a nerve plexus is involved the symptoms are more general and spinal lesions must be differentiated. Take the obstetrical palsy. A lesion usually involving fifth and sixth cervical roots of the brachial plexus. There is flaccid paralysis and often very little anaesthesia, a picture commonly seen in infantile spinal paralysis or anterior poliomyelitis. Closer study of the onset and distribution of paralysis will exclude spinal disease.

The most common cases of multiple neuritis in childhood is that dependent upon toxins, especially diphtheria. The extremities show flaccid paralysis, loss of reflexes. Anaesthesia in keeping with the nerves involved, some nerves may not suffer as severely as others, the same will apply to the R. D. of the muscles and motor nerves. Nearly all cases have cranial nerve paralysis, especially to the uvula. One should not mistake this picture for a cerebral paralysis. A lesion of the brain sufficient to cause diplegia and cranial nerve palsy is sure to give rise to mental and cerebral symptoms, especially the language zone as manifested aphasia. There will be spastic paralysis which is usually incomplete, with contraction, athetosis and increased reflexes. Sensation is not so profoundly disturbed, especially after the early stage. Many of these cerebral diplegias have no sensory symptoms, at least not manifest in the later history. All cases are not so easy for diagnosis.

CASE VIII:—Boy age 14, mother has chronic bronchitis. Grandmother died of tuberculosis. Father's people healthy. Birth was normal and child did well until third year when he suffered from "indigestion" and had convulsions. Between three and five noted child could not run like other children. His legs were stiff and arms were "raised in the air." Would stumble and fall. In seventh year was very thin, muscular wasting, enlargement of the glands of the neck were noted in eighth year. Physical examination showed marked muscular atrophy of all skeleton muscles and marked weakness. There was a right foot drop, marked scoliosis. No sensory disturbance, all superficial and deep tendon reflexes lost. No pupil signs, no bladder or rectal trouble, no pain. Was able to walk, but difficult; arms showed most weakness, could not put on collar and tie. There was a double seventh nerve palsy. Had been hard of hearing for several years. Mentally he was

bright, wanted to do and learn. Wasserman negative. I regarded this case as one of Fredrick's ataxia, but saw the boy only for consultation and one visit is not sufficient to confirm a diagnosis in such a case. I do not believe it a case of simple muscular atrophy for the fact that the muscle wasting will not account for the total loss of all reflexes in the extremities. The lesion must be connected with the sensory tracts in the cord.

CASE IX:—A girl, 3 years old. The mother noted a slight deviation of the eyes, also that she did not walk as her other child. There was a slight stiffness or spastic condition of the lower extremities. There was no history of spasms or illness, but the birth was prolonged and instrumental. My examination confirmed the slight squint, rigidity and heightened reflexes of the legs, but no clonus or Babinski. I expressed an opinion of cerebral trouble following the instrumental delivery. One of those obscure pictures that is often noted following slight injury at this time. I have been informed that this child was completely relieved by a good dose of castor oil. My consultation fee has not been paid.

CASE X:—An infant child developed typical Jacksonian fits of left arm and face with coma supposed to have followed a fall from a buggy. These attacks continued several days. Sufficient time was allowed a number of doctors to see and express an opinion. Post-mortem examination by Dr. Bauldauf showed microscopically no abnormality of the brain or its membranes.

In the diagnosis of cerebral paralysis we have the advantage of the cranial nerves which enables us to exclude other forms of paralysis. Paralysis may assume the monoplegic, hemiplegic, paraplegic and diplegic form.

Monoplegia of cerebral origin is comparatively rare and usually due to some isolated lesions in the motor cortex. The characteristics of monoplegia are such that it should be readily recognized. It is rarely complete, and if there is complete paralysis other centers in the brain are affected which will immediately lead you to suspect brain disease. If there is incomplete paralysis, the defect is noted in the inability to perform certain acquired acts. As for instance, writing, which does not require one special group of muscles, but many muscles in the whole arm. It is the combination of muscles brought into play by certain acts that is stored in the brain centers. It is not isolated groups of muscles or individual muscles that suffer. The most frequent forms of paralysis is the so-called brachial and crural monoplegia that follow isolated lesions of the brain. I recall two cases of monoplegia of the arm, in which the pati-

ents could use the arm in many ways; but to perform certain acts was very difficult. I recall a monoplegia of the leg, in which the patient while in bed moved the leg very well, but in walking he had a typical foot drop, an inability to flex the leg. Each of these cases showed disturbance of sensation or aphasia enough to immediately suspect cerebral disease. Nearly all cases of hemiplegia are the result of brain injury. The typical case should require no special knowledge to detect.

The paraplegic type are usually chronic cases and in many instances the parents do not know their child is affected until they begin to walk. This may be the sequel of meningitis or other infectious diseases, so-called brain fever or maldevelopment as illustrated in Little's Disease. The symptoms are usually a spastic paralysis which may be noted only in a slight disturbance of the gait, a cross-legged gait, or a complete inability to stand or walk. The examination will reveal rigidity and contractures, heightened reflexes and Babinski's sign, practically no sensory disturbance, slight development of muscles, due more to lack of use than true atrophy. Often these cases show defective speech, sight or hearing.

The interesting phase of the paraplegic is the localization of the injury. Such a picture immediately suggests the upper neuron. If there are no cranial nerve symptoms, no arm symptom, no sensory signs, you conclude only the fibres to the leg are involved. If your patient received an injury to the head or had "brain fever" or meningitis you might suspect that the original site was in the cranial vault; otherwise, you would have to conclude that the upper neurons are affected and your localization is difficult. The so-called Erb's spastic spinal paralysis or lateral spinal sclerosis is an adult picture of spinal origin of the same type that I refer to. In the latter disease, the injury is in the pyramidal tracts of the cord, or axons or the cortical nerve cells. Cases that concern us most as to diagnosis are those cases which begin to appear as the child grows older and begins to use himself. Then the parents notice that there is a defect either of speech, sight, hearing or motion. During the course of the year I will see a number of cases and history something like this:

During the first year they had an attack of fever, sometimes quite high, either accompanied or preceded by convulsions. After the usual doses of laxatives and general treatment, the child was supposed to have recovered. But when the child began to walk or talk, parents noticed that they did not respond as other children. On inspection, you will find that possibly there is only a defective motion

in the lower limbs, they walk stiff-legged or cross-legged, they scrape the toe of the shoe or maybe unable to stand at all. On examination you will find heightened reflexes, may or may not find Babinski, there is more or less rigidity about the muscles in the affected part. There may or may not be cranial nerve involvement. This may be only a slight squint or difficulty in articulation. I have seen them presenting only a profound aphasia. What these conditions are or what they are dependent upon are only revealed by post-mortem examinations. This may be found to be an atrophy of the portion of the brain from natural failure of development, cysts or degeneration from hemorrhage or inflammation. The symptoms will always warrant the diagnosis of infantile cerebral paralysis. The symptoms will not always lead you to exact localization.

In the diplegic there is always other symptoms than paralysis. The injury to the brain sufficient to cause a paralysis of all four extremities is usually sufficient to involve other functions of the brain which would lead us to a diagnosis. The idiot, the dumb, the epileptic diplegic following difficult birth, meningitis, etc., is a picture too common to be mistaken.

In recognizing paralysis from infrequent lesions like tumor, hydrocephalus, cerebellum lesions, the symptoms are not always characteristic; they are slow in developing and in many instances you are never satisfied with your opinion. Some of these conditions remain quiescent or only manifested by occasional epileptic seizure or slight mental deficiency and ultimately present a picture which is cerebral in origin, but you will be unable to classify it as any one particular disease. As for the value of localizing cerebral symptoms my experience has been unfortunate and leads me to the conclusion that none are reliable and even when you group them together they are often misleading. I have had children referred to me for nervousness and weak eyes, and from lack of symptoms treat them for such, when really they were suffering from a beginning brain tumor or hydrocephalus. Before you can recognize trouble within the cranial vault you must have symptoms indicative of such a condition. However, cerebral symptoms can exist, which are to all rules serious, but disappear. Several doctors, including myself gave up a case of supposed tumor as fatal. She fell down a flight of steps and made a rapid recovery. To-day she is as fine a looking girl as walks the streets of Louisville.

DISCUSSION.

Curran Pope, Louisville: I think that all of us are pretty well agreed that it is essential to begin treatment of a patient suffering from poliomyelitis as soon as possible, and this duty naturally falls upon the family physician. I shall have very little to say except in the way of caution to the effect that the family physician usually does a good deal more harm than good by attempting to treat such a case with the ordinary coarse coil faradic battery. He had better omit that part of the treatment, and if he cannot get the scientific application of an interrupted galvanic current, or later along the slow wave sinusoidal, he had better not apply it at all, but trust to the use of heat and massage to do what he can for the case. As soon as the acute symptoms subside, the muscular structures, as far as possible, should be systematically exercised.

We are thoroughly in accord with the position taken by Dr. Owen in his paper that as soon as the deformities are well settled, if I may put it that way, it is then time for us to take up and consider the question of surgical interference. The question of surgical interference should not be put off until the useful structures have been ruined by over exertion and ill care.

I have listened with a great deal of pleasure to Dr. Moren's excellent paper, and agree with him that the examination of a case, as is ordinarily done, and as we are expected to do it when we are called in consultation, does not in any sense of the word fit these cases nor it is sufficient. You family physicians expect too much of us. These cases should be turned over to us not for a diagnosis, but for study. A man cannot in an hour possibly go over a case of the character that the doctor has detailed in his paper, and do half way justice. He can hardly make a thorough sensory examination in an hour. I have watched that past grand master of sensory investigation, Dr. Head of London, and I find with all of his expertness he can rarely ever get over a case under an hour and a quarter, oftener an hour and a half, and he really investigates the sensory system. He investigates it with special instruments of his own devising, and his method should be more frequently followed. I have his instruments and follow his method. The ordinary methods of sensory investigation are as a rule absolutely valueless in such an examination, so that where cases are referred, the family physician in referring them should give the specialist ample time to study the cases, not diagnose them.

With regard to the differential diagnosis of Pott's disease, nothing is easier than that. The X-Ray picture will quickly settle the question, so that we need never make a mistake of overlooking Pott's disease. I venture the assertion, that if Dr. Moren had had the opportunity to study these cases that have evidently been psychoneuroses (I want to get away from the term hys-

teria), the chances are there would have been no mistake, because sooner or later, or within a reasonable time, we may certainly expect to get hold of the real thing, and I want to say this: I do not agree with him that the case that has sustained a trauma is well. She is well on the SURFACE, but the real subcutaneous condition that produced the psychoneurosis or hysteria is still there. It has simply been inhibited and driven into the unconscious where it is still living and passing away its existence and will probably remain there permanently if the inhibition continues, if not it will reassert itself. If it does not, it is simply a question which is the stronger, the unconscious psychoneurosis or the inhibition, and whatever would break down the inhibition would cause this. That is why hysteria returns so frequently. The moment you analyze these patients psychically, get hold of and reach the underlying psychological condition, the possibility of its doing any further damage has disappeared.

I would like to ask the doctor in closing, upon what he based his statement in his third or fourth case that it was one of Friedrick's ataxia. I tried to follow his paper closely, and it seems to me that was a case that might be classified in three or four other categories, and particularly, I would like to ask the question as to whether this might not be considered one of those early cases of cerebellar disease?

I would like also to differ with the doctor on the question of localization. I have had so many satisfactory cases of localization where they have been intensively and progressively studied, that I would like to take issue with him in his assertion that localization is very uncertain for the neurologist. I think that some of the cases carefully studied, by inductive and deductive reasoning, based on the now well known anatomical knowledge—presumably in the possession of all expert neurologists.

Milton Board, Louisville: I wish to elaborate somewhat what Dr. Pope has stated, and that is the importance of allowing continued study, in any case involving the central nervous system or the cord, before benefit can be derived. I make that statement to the visiting physician in many instances. I say to him, leave this patient for observation, expressing the opinion that the patient should be under observation several days, not particularly for treatment, but for an observation sufficient to enable one to make a diagnosis, and in order that we may know what we are doing.

I would like to call attention in passing to the fact that when the medical profession have time from the wonderful work they have been doing in the study of pellagra, typhoid fever and tuberculosis, as well as alcoholism, they should take up the question of mental hygiene and begin to try and learn how to teach people to rear their

children from a mental standpoint, from a nervous standpoint, because if we are to have conservation of our nervous strength or energy in the future, it must be begun in childhood. It must be begun in the home of the boy and with the assistance of the family physician. It is too late in the majority of instances to wait until well marked mental disease has developed, or until well marked disease of the cord has developed. It is too late then in many instances to get any results other than such as may be obtained by surgery or by other methods; but we have here a wonderful field of usefulness if we would begin as physicians in the schools and in the homes to teach the parents of the children and the children themselves and the public the important lesson of mental hygiene, the lesson of personal discipline, the lesson of how people are to be raised from a mental and nervous standpoint.

Guy P. Grigsby, Louisville: With our increasing knowledge of things concerning medicine and surgery, it makes it difficult for us at the present day to be well informed on a single subject. In other words, it is the day of specialism, and orthopedics as a specialty has assumed such proportions at the present time that it commands one's entire time and attention.

We have learned much concerning the etiology and prophylaxis of infantile paralysis. The treatment has made marked advances, particularly following the acute attacks, and in regard to the treatment of the deformity that ensues later. However, there is much yet that can be done toward the relief of this class of unfortunates. This is not due so much to the lack of knowledge as to the proper treatment as it is to the delay and the improper application of those measures that experience has proven of benefit in these cases. Up to a few years ago the treatment of these cases consisted entirely in the use of massage, electricity, and braces. I do not want to decry the use of these measures because experience has proven their benefit in this class of cases. They are strengthening to the weakened muscles and are aids in the prevention of deformity. The object of a brace is to prevent deformity, and at the same time utilize the remaining power in order that the member may carry out its function. The muscles vary in strength, and if one is acquainted with this function the final result or disability may be accurately predicted. Unfortunately by the improper use and the delay in the use of these measures at the time the orthopedist sees these cases, the deformity has already ensued of the worst type, namely, deformity of the soft structures combined with bone deformity. The profession unfortunately seems to regard the surgical treatment of these cases of deformity following infantile paralysis as purely a late if not the final resort. This has proven a great drawback and a hindrance in the advancement of op-

erative work in this line. This tendency is changing in regard to surgery in general, and I am sure in the future the same tendency will be manifest in orthopedic surgery which will do much toward encouraging this class of work.

I would like briefly to speak of one or two points brought out by Dr. Owen. He has told us of several operative ways of dealing with some of these deformities. Their ingenuity and mechanical correctness must appeal to one's admiration. In regard to the transplantation of tendons, it has seemed best to pass the tendon through a hole drilled in the bone. It has been shown that where a tendon is sutured to the periosteum alone it will pull away from its attachment or change its location. In those cases that are hopelessly paralyzed, and tendon transplantation is impractical, in these the Gallie operation can be used with great success. In some cases where it is impossible to use the paralyzed tendon, artificial ligaments of silk have been used successfully. We must heartily recommend the Whitman operation for the paralytic condition of calcaneo-valgus. This operation consists in a backward displacement of the foot with astragalectomy. It is remarkable what good results can be obtained and a distressing deformity relieved.

Phillip Barbour, Louisville: I do not want to criticize any of the diagnoses that have been made, but I want to cite one or two cases which are sometimes rather misleading to doctors, and these are the cases of pseudo-paralysis. I have occasionally been called in consultation to see a child where the diagnosis of paralysis had been made, where there was no real paralysis, but there was inability on the part of the child to move on account of pain. It is not easy to say whether the child cannot or does not move because it hurts. I think nearly all of us have children come to us occasionally that cry every time we look at them, not only when we touch them, but even if we come near them. There are certainly cases of pseudo-paralysis in which there is inability of the child to move itself from the pain or scorbatus. In one case the child was fed upon pasteurized milk, which is recognized as a cause of scurvy. Again, rickets gives much pain to a child. Syphilis, of course, is one of the frequent causes of inability on the part of the child to move its limbs, the pseudo-paresis of Parrot. I have seen cases of phimosis in children which interfered with the movement of their limbs. I think that is quite frequent in boys, two years of age, when they begin to walk, and they often need an operation.

Dr. Moren spoke of the difficulty of diagnosing tumors in the brain by localization. I recently had the experience with a child in Louisville, the case having been seen by other doctors, that had gradually lost ability to move its limbs, and when I saw the child it lay in bed with practically the left side of the body paralyzed. For various reasons we decided the child had a tumor or an ab-

scess of the brain. The child was operated upon by one of the best surgeons in Louisville, and when the dura was opened the brain showed there was intracranial pressure; the surgeon attempted by aspirator to draw pus from that side of the brain and was unable to find it. The child died two weeks later. A post-mortem examination was made and an abscess was found on the left side of the brain. The child was paralyzed on the left side of the body, and yet this abscess was found upon the left side of the brain. I am unable to explain it.

A. C. L. Percefull, Louisville: I dislike very much to let these papers go by without adding my endorsement to nearly all that has been said in both of them. I wish to confine my remarks very largely to the paper of Dr. Owen. The best way to correct deformities caused by infantile paralysis is to prevent them. I think more stress should be laid upon the prevention of these deformities than the correction of them after they have taken place. I believe to the general practitioner this blame can be laid very largely because they allow these cases to run around, and neglect them, because they can get around fairly well, and are apparently in good health after the acute stage of the infantile paralysis has passed. I believe if we will send these children to the orthopedist, we will not have to do so many operations to correct the deformities after they have come. Oftentimes a simple subcutaneous tenotomy and over-correction of the deformity is all that is sufficient. Frequently the removal of some bone is indicated, but great stress should be laid upon the prevention of the deformity rather than its correction after it has taken place.

W. Barnett Owen, Louisville (closing the discussion on his part): I thank you for the liberal discussion. A small operation performed for prevention of deformity is far more desirable than a much more radical one done at a later date to correct an almost hopeless cripple, which could have in most instances been prevented, had the proper early treatment been instituted.

Many cases can be benefited greatly and the milder types of partially paralyzed can frequently be permanently corrected and a small percentage cured by mechanical appliances and muscular regenerative treatment.

John J. Moren, Louisville (closing the discussion): With reference to the point brought out by Dr. Barbour of paralysis on the left side with a lesion on the left side of the brain, I will say, sometimes we have anomalies where the decussation does not occur and the fibers go from one side right straight down. That may have had some influence in causing paralysis on the same side.

One other point: I want to go on record as saying that there is hysteria and hysteria. There is some so-called hysteria that can be relieved by so-called psychotherapeutics, and there are some types of hysteria, the real old-fashioned

hysteria, which we see every day, that the devil himself cannot cure. (Laughter.) They bob up here and there; they are hysterical, and as long as they live they will be hysterical people. I honestly believe that. I have seen young people impressed by various ideas and experiences that have influenced their emotional life until they reach the point they cannot control their emotions, but that is not what is described by authors like Dana, Oppenheim, and Starr, and men of that kind. They describe hysteria which is a psychosis. If psycho-analysis can relieve them, I have got something to learn, but I have relieved the emotional state due to various impressions by the so-called analytical measures to some extent, or at least corrected the impressions, and then the patients are all right.

Sugar Solution in Treatment of Leukorrhea.—

Zweifel was impressed with the fine results reported by Kuhn and Baumer from the use of sugar solution in treatment of gynecologic affections, as also with Magnus' success with it in 100 cases of acute or chronic osteomyelitis. Magnus and Baumer use the sugar in substance, pouring from 150 to 250 gm. on the wound. Sudeck has applied the sugar treatment in sixty-six cases of leukorrhea of long standing, rebellious to all other measures. He used a 50 per cent. solution for rinsing the vagina or had the woman dissolve in the irrigator two tablespoonfuls sugar in two tablespoonfuls of hot water. When cooled sufficiently, this was allowed to flow into the vagina after she had settled down in bed for the night. This was repeated after eight or ten days, and over two-thirds of the women returned then to extol the improvement or cure.

In the few cases in which the sugar treatment failed to realize a complete cure, he ordered vaginal injection of a 0.33 or 0.5 per cent. solution of lactic acid after swabbing out the vagina with a 5 per cent. solution of silver nitrate. In thirty-eight cases in which this treatment was applied, there were no failures. The bacteria in the vagina were sensitized, as it were, by the nitrate so that they succumbed more readily to the action of the lactic acid. He orders the latter diluted with equal parts water; a teaspoonful of this to a pint of water for the douche.

Thyroid Treatment of Dementia Praecox.—

Lenel is quite encouraged with the results of thyroid treatment in the twelve cases in which he has given it a thorough trial. These patients were all between 17 and 24. The improvement persisted for five years in one case, and then there was a return of the former condition. In the other cases the improvement has persisted to date, but the interval since has been shorter. In one case the interval is still too brief for estimation of the outcome.

METHODS OF EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.*

By B. K. MENIFEE, Walton.

The diagnosis of early pulmonary tubercular lesion is important, because it is these cases, when the anatomical changes in the effected area are slight, and when the infected individual has not been subjected to a prolonged toxemia from his lesion that we have everything in our favor to aid us in bringing about an ultimate healing of the lesion.

The more advanced cases offer less chance, not only because of the debilitated condition of the patients, but because of the much greater area of tuberculous disease which must be handled by our patient's reparative power, before we can say that a healing has taken place. We must, therefore, not give up hope in any stage, for one cannot predict the outcome of any case, early or late, with certainty, but we should, above all things, concentrate our efforts in an attempt to recognize early lesions in which the physical signs in the chest has not as yet reached the stage when classic physical signs are present.

Therefore, in this paper we shall consider the early diagnosis of pulmonary tuberculosis, remembering the while that by early tuberculosis we mean that stage wherein the disease manifests itself chiefly through symptoms referable at first sight to other organs and systems, rather than the lungs, and when the physical findings point to no disturbance or impairment of lung tissue or to very slight grades of functional and anatomical operations.

In the consideration of these early cases the history of the patient's family and of himself are of importance. The family history of tuberculosis is valuable to use because in a majority of cases the environment of our patient's family was his environment, and sources of infection operating in their cases may often have been operative in his case also, plus the added source of infection from a tuberculosis parent or brother or sister.

The limitation of the family history to a consideration of the heredity is worthless, for it can only establish a predisposition, which, whether present or absent is of minor importance compared to a clear history of exposure to the disease. The personal history of the patient often gives a strong hint as to possibilities. His home surroundings and occupations are significant. The previous illnesses of the patient are important. Pleurisy is sug-

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gested, for it is most probable that the greater majority pleurisy succeed rather than precede a tuberculosis lesion. A history of influenza, measles, whooping-cough or pneumonia, because of their respiratory features, are strong factors in lending support to the diagnosis which must often be based upon a few clinical findings, presumptive evidence and perhaps some small pulmonary anomaly. Such a diagnosis is necessarily presumptive, but it will better serve the welfare of the patient than no diagnosis at all, and the pursuance of an expectant course. Perhaps the most frequent symptom complained of by the patient is languor, which is almost universally present in early cases, and which only too often fails to produce further inquiries on the part of the physician. Eliciting this symptom is, as a rule, not difficult for its character fixes itself ineradicably upon the patient's mind.

This unwanted feeling of laziness, in the absence of other symptoms alarms the patient who feels that he is responsible for this loss of initiative, and not some disease. Later boring, aching pains in the limbs appear, more severe in the afternoon when the temperature is beginning to rise and the patient realizes that it is really not himself who is to blame for his laziness, but some actual indisposition.

This fatigue often gradually disappears toward evening, to reappear the next day. It lessens in intensity as the system becomes more accustomed to the intoxication and later in the disease may disappear entirely. It should not be confused with the weakness of advanced stage of the disease which is due to malnutrition.

Almost, if not equal, in importance to languor as an early symptom is anorexia. Beginning often as a slight loss of appetite, the patient may come to hate the sight of food, and culinary odors may even produce disgust or attempts to swallow food result in absolute nausea. More often the symptoms are not so marked as these, the patient not losing his desire for food, but taking a very small quantity of food completely satisfies this desire, and further attempts to eat result in uncomfortable sensations of satiety. The gastric disturbances are probably due to muscular weaknesses and impaired mobility rather than to achlorhydria which occurs in the late stage. Another symptom rather constantly occurring early is a greater or lesser loss in weight. This loss in weight is not usually large and rapid, and never approaches the emaciation resulting in the later stages of the infection.

It is more probably due to the lessened intake of food and the certain amount of muscle atrophy due to the extreme fatigue and weak heart action. It is an early and constant phenomenon.

Dyspnoea or greatly increased breathing

on slight exertion is another condition for which the patient often presents himself and which is of early developments in pulmonary tuberculosis. The patient finds that on slight exertion he becomes breathless and, thinking more probably of heart disease than tuberculosis, presents himself to the doctor. The dyspnoea is not due to impairment or destruction of lung tissue, but to the disturbed or fatigued condition of the circulatory system. This dyspnoea is, therefore, not comparable to that resulting from pressure on the vagi from an enlarged bronchial gland, or irritation of that nerve by numerous miliary tubercles, neither is it to be confused with dyspnoea of rapid pleural effusion or suddenly developing pneumothorax. All these conditions belong to somewhat later stages of the infection.

Hand in hand with this shortness of breathing we find a rapid pulse, which is irritable, increasing its rate abnormally on slight exertion. The blood pressure according to most authors is subnormal. The capillary resistance is often diminished and the pulse may be therefore full, but soft. In most of these early cases a greater or less degree of anemia is present, to be found if looked for. It is really chloroanemia, the numerical relations of the blood elements not being greatly disturbed in these cases.

Next we come to temperature, and this has been left until now, not because it is not significant, but because it is not usually a symptom of which the patient is conscious and, therefore, is not one for which he seeks relief. Yet it is perhaps the most valuable symptom that we have to guide us in arriving at our diagnosis in the cases which we are discussing. The temperature unless obtained and interpreted correctly may mislead instead of aiding us. Morning and evening temperature are faulty, because in these two records we do not obtain the maximum and minimum points of variation; the maximum occurring between two and six p. m. and the minimum between two and six a. m., therefore for a short time at least, two hourly observations are necessary and the chart should be kept carefully, so that the temperature range can be accurately and definitely noted.

Besides the afternoon rise of temperature there is frequently to be found an early morning hypothermia, a temperature of 97 degrees being not uncommon. This hypothermia is also a valuable point in arriving at conclusions. The fever is an early and constant symptom, and is due to the effect on the system of the destruction by the body of the toxins liberated by the tubercle bacillus. The higher fever of the late stage is partly due to the products of secondary invading organisms.

The patient at rest may have no fever, but

after exercise the temperature rises, or if the patient is allowed to be up and around, he may show some rise in temperature.

Night sweats may occur, but these are usually somewhat later manifestations.

Cough may or may not be present, and if present is usually slight so that many patients really do not complain of this symptom.

Coming at last to physical signs we must insist again that in the great majority of these cases they are either negative or so slight that they are not characteristic. Many of the early lesions are not mucosal in origin, but originate in the stroma, or lymph tissue of the lung, and here we must expect for anatomical reasons, no great alteration in the lung parenchyma, and even in early cases where the lesion is of the mucosa, early changes are so slight as to be often not obtainable on physical examinations. If we have some prolongation of expiration, harsh breathing or perhaps if lucky, a few fine moist rales over the effected area we have about exhausted the auscultatory findings. Rarely on percussion we may find a small area of slightly impaired resonance. Lastly, we have two other means in hand to aid us in our diagnosis, namely: the tuberculin reactions and the X-ray. Without going into the discussion of the results of and indications for the various tuberculin tests, let us say simply that the Phipps Dispensary, after careful study has recommended the Calmette reaction as most efficient for demonstrating an active lesion, while if we wish to produce a focal reaction we have the subcutaneous tuberculin test available. Not enough emphasis can be laid upon the fact that these tests should be used only with the greatest of care, as neither is without danger. The X-ray when interpreted by a trained Roentgenologist is of value and the physician should never fail to avail himself of this means when possible.

These are the methods by which early tuberculosis may be diagnosticated or at least strongly suspected and we must reiterate the statement that it is far better that a physician make a diagnosis of tuberculosis where none exists than to err in the opposite way. Given any of the above symptoms the existence of which no explanation can be made, a careful study of the patient should be made, keeping always the possibility of tuberculosis in mind. We feel that a morning hypothermia and an afternoon fever together with the other clinical conditions noted, or some of them even in the absence of physical signs in the chest, justifies the diagnosis of tuberculosis in its infancy fully as much as the classical symptom group justifies the diagnosis of typhoid in the absence of a positive blood culture. Other conditions simulating tuberculosis must, of course be excluded, and this rarely presents

any great difficulties. So studying our cases carefully, let us endeavor in the future to make more of our diagnosis of pulmonary tuberculosis before physical signs are present in the chest, and tubercle bacilli present in the sputum, thereby increasing the number of cases which heal, and decreasing the number who go to the grave because their disease was discovered "too late."

"CHILDHOOD INFECTION, ADULT DEATH."*

By O. E. SENOUR, Union.

Koch's brilliant career as father of modern tuberculosis science began, of course, on that memorable evening of March 24, 1882, when he gave to the world the result of his painstaking work. It was the usual monthly meeting of the Physiologic Society of Berlin but it was perhaps the largest gathering which that body ever had. Koch's paper was announced under the title, "The Etiology of Tuberculosis." Taking into consideration what Koch had given to science before along the same lines (I refer to the discovery of the spores of anthrax bacillus and his concomitant bacteriologic studies), the hearers were, of course, expectant and looked for great things in store for them. It was characteristic of Koch's modesty and true scientific spirit that he had preferred to refrain from talking about his researches in tuberculosis until he could conclusively prove his thesis to the satisfaction of every one and show absolutely accurate results. To students of bacteriology it must be recalled that Koch was the first to seek the production of a solid medium for the purpose of getting pure cultures, and it was only after he was in possession of such a medium that he attempted to isolate the germs found in tuberculosis tissue. It is of historical interest that on the evening of March 24, 1882, after Koch had finished reading his paper, there was no applause nor any enthusiastic manifestation of approval and for the first time in the history of that society, a paper, though listened to with the most profound and respectful silence, was not discussed. The facts presented by that master of bacteriologic science were too convincing for discussion. The audience looked expectant to that most honored member and veteran debater, the father of cellular pathology, the immortal Rudolph Virchow, but he too remained silent. He felt that another great master in medicine had arisen and that the evidence of Koch's conclusions did not permit any doubt or dispute.

* Read before the Kentucky State Medical Association, Newport, September 22-25, 1914.

The original communication announcing the discovery of the tubercle bacillus as the prime and only cause of tuberculosis appeared in 1882. It was he who showed us the presence of the germ in the pulmonary secretions and involved tissues, and also to a minor degree in other secretions of man and beast afflicted with tuberculosis.

It is because of this knowledge that the new science which we might call modern prophylaxis of tuberculosis was created. Since that time, thirty-two years ago much has been said, many discussions have taken place, and much has been written relative to the modes of infection, prevention of the disease, the various ways of transmission, and the treatment, but little has been said as to the time of the infection. I realize in presenting this subject "Childhood Infection, Adult Death," that what I shall say will be along the line of theorizing, and that very little conclusive evidence has been gathered on "Latent Tuberculosis," until very recently little thought has been given to this phase of tuberculosis. Our scientific men and research workers have been too busy in the last thirty years trying to find a cure, and the various methods of prevention to give this subject much thought, but recently they are beginning to realize from their investigations, that many cases of adult death from tuberculosis, acquire their infection in early childhood. Some men who are making investigations along this line claim that 95 per cent of children are infected some time during childhood. This is a startling statement, but when we realize that this family of acid-fast bacteria is very large and is broadly distributed in nature, it is not so startling after all. When we realize that the tubercle bacillus is found in water, upon the grass, and hay, in milk and butter, and in certain excretions of the body, that all cold blooded animals as well as warm blooded animals, suffer from tuberculosis, that it is one of the most common diseases of the barn yard fowls, turkeys, pigeons and birds suffer alike, that it is prevalent in beef cattle and milk cows, hogs, sheep and rabbits are susceptible, fish, especially carp, are also victims, and since it is a well-known fact that the tubercle bacilli found in fish, fowl, cattle and men have a strong family resemblance and produce the same pathological changes which in turn produce death, we wonder that the other five per cent escape infection. From a study of the pathogenesis of tuberculosis, especially in relation to the infection of the lungs from the bronchial glands and the origin of tuberculosis of those glands, A. W. Jones in the *Journal of the Minnesota Medical Association*, concludes that childhood is the period of life in which the greatest susceptibility to infection occurs, that

adult tuberculosis is generally an after-result of childhood infection, that if the infection occurs before two years of age, the patient promptly dies, if after two years of age, the disease is more liable to become latent, and from this age up to puberty the liability of the disease to become latent increases with each year of age, that what to-day is called early tuberculosis in adults, is generally the second stage or the beginning of the third, and at best can only legitimately be spoken of as the early stage of pulmonary tuberculosis, that it should be the business of preventive medicine to prevent the arrival of this stage of the disease, for if allowed to occur, the menace to the patient and to the public increases, and the patient's chances of ultimately regaining his condition of latency or of recovery are continually growing less. One may conclude therefore that the patient's safety depends upon two conditions; first, the thoroughness with which nature did her early work of imprisonment of the bacilli; second, his after condition as represented by his general status of health, this latter depending upon the degree of his natural resistance, the lack of physical development and the influence of intercurrent diseases, overwork, worry, dissipation, and unhygienic surroundings.

From the indications of nature, then, one must conclude that the time to expect the greatest results from preventive measures is in childhood, and the earlier we begin the better. And as our ultimate purpose is the greatest good to the greatest number, and our hope the final extermination of the disease, it is indispensable that our preventive measures be applied to all the children of the people, and that they be continued for a sufficient length of time to obtain the greatest amount of benefit possible, which practically means throughout the whole period of childhood. As a disease of society, tuberculosis lies latent in the infected house and the unsanitary workshop, ready to attack the weaklings, just as it lies latent in the human body seeking a favorable moment to invade the tissues.

The view of Berhing, who believes that tuberculosis is acquired in childhood and remains latent in the system until adult life, when various circumstances may render possible a reinfection from an already existing tuberculous focus, have gained many adherents. In our every day practice of medicine we all see this class of cases. We see the child that does not develop well, is undersized, poorly nourished, the chest having the characteristic phthisic habitus; some of the cervical glands are enlarged and there are attacks of indigestion with fever in which the parents and oftentimes the physician will attribute to some trivial cause.

Articular rheumatism may develop, and

chorea, which disappears towards the end of puberty, is frequent. Hysteria is apt to manifest itself and usually there is hypertrophy of the thyroid, perhaps pronounced goiter. If the lungs are examined they present at the apices the evidences of an abortive tuberculous infection.

Inflammatory affections of the fibrous tissues are frequent, and mitral stenosis is a prominent complication. Finally as these people reach old age after life of invalidism, we believe they generally succumb to a reinfection from their old tuberculous infection which has remained latent in some part of the body during all these years. During the last few years we have learned many things about this disease which have made us change our attitude toward it. We have changed its classification from that of a hopeless disease, and made it one of the most curable of all chronic diseases. To-day a favorable result can be produced in from 60 to 90 per cent of early cases of tuberculosis. After tuberculosis once assumes clinical importance and produces symptoms which are recognizable, it is apt to pass on to a more advanced stage without giving warning; and, as this advancement occurs the chances of cure decrease from 60 to 90 per cent to 40 or 60 per cent. After it reaches the moderately advanced stage it is only a short time until it is far advanced, unless nature by her efforts imprison the germs in some part of the body, only to light up again later in life and destroy the life of the unfortunate victim.

No disease assumes a greater importance in medicine to-day than tuberculosis. This is not only true because of its great mortality, but because it is a disease which produces a long sickness and affects not only the patient but the entire family.

The most important factor in the attacking of this great scourge is early diagnosis. We talk about it as though it were easy to make an early diagnosis of tuberculosis. To differentiate between healed, quiescent and active lesions requires considerable skill and care. In spite of the fact that we know how to make early diagnosis, most patients pass on beyond the early stage before the diagnosis is made. Why is it that this disease is not diagnosed early? Whose fault is it? Some are inclined to blame the medical men entirely for this lack of early diagnosis, but I am glad to say that the blame does not all belong here. Often the patient does not present himself for examination when the lesion is small and if he does and the physician suggests a chest examination, it is not uncommon for the patient to refuse to submit to it.

If the physician does examine the patient and tells him that he finds some trouble in the lung, it is not uncommon to have the patient

to go to another physician and still another until he finds some one who is willing to give him the opinion he desires.

On the other hand there are a great many patients who do consult physicians, complaining of these early symptoms, without a diagnosis being made. For these, as a profession, we are responsible, and it is our duty to see that the number is reduced to the minimum.

In order to understand what is meant by early diagnosis of tuberculosis it is necessary for us to review briefly the pathology and life history of tuberculosis as a disease.

We know that tuberculosis affects nearly all children. There is hardly a child among the cities' poor over the age of fifteen who is not already infected with tuberculosis.

Observations have been made which show that as many as 95 per cent. of hospital children are infected with tuberculosis before they reach the fifteenth year. Even among country children, we find, according to the report of Jakob, that 30 per cent. are infected by the time they reach the school age; and most surprising of all, this same observer tested many children in the country districts where there had been no tuberculosis and where the children had not come in direct contact with people who had this disease and found 30 to 40 per cent. of them infected.

This shows that our efforts in the prevention of tuberculosis must be directed toward childhood. We find children infected early. How this infection takes place we do not know exactly, but we do know, however, that the bacilli which produce infection in children come directly from some individual who has the disease. They may have been carried through food or through the air.

In these country districts where the children have not been associated intimately with tuberculosis it is possible that the infection might have taken place through food.

In cities, however, and in homes where there is tuberculosis in the family, the source of infection is much more easily accounted for. At first tuberculosis is a disease of the lymphatic system.

Bacilli may enter the body in different ways, but usually we may assume that they enter through the mucous membrane of either the respiratory or the alimentary tract.

After they once pass through the mucous membranes they enter the lymphatic channels and pass to the nearest glands. The glands which are most commonly infected, whether the route of the infection be through the respiratory or alimentary tract, are those of the mediastinum.

While this is primarily the seat of infection the disease extends, in a certain proportion of cases, probably about 60 per cent., to the lung. This extension may take place early in

childhood or it may take place later in life. Why it extends we do not know.

After the extension has occurred the disease very often settles down, becomes quiescent, or goes on to a healing. In a certain proportion of cases it remains quiescent for a time and then breaks out again and goes on to the production of acute symptoms and is recognized as clinical tuberculosis.

Therefore "Childhood Infection. Adult Death."

We are led to believe that these early infections, whether they heal out entirely, or whether they only remain quiescent for a time, produce rather a marked immunity which affords a certain protection to the individual.

We were formerly taught that there was no immunity in tuberculosis. This we now know to be erroneous. There is a marked degree of immunity in tuberculosis, otherwise it would be impossible for any patient who has an advanced degree of tuberculosis to ever secure a healing. We know that every now and then many bacilli are thrown into the blood stream, which are destroyed by the immune bodies present, without even permitting a new focus to occur.

We also know that patients who have open tuberculosis have millions and millions of bacilli in their air passages without new infection occurring.

We know that these same individuals swallow millions of bacilli without producing infection of the intestinal tract.

The same number of bacilli put into the intestinal tract or air passages of a healthy individual would produce infection without doubt.

These early lesions that occur, then, are to be looked upon as producing a certain amount of resistance and in that way fortifying the patient against further infection.

In spite of this, however, every now and then sufficient bacilli will find lodgment in the tissues, either escaping from the focus which has previously been quiescent or coming in from the outside, to produce new infection. In adult life we now believe that the infection that we find is almost invariably one secondary to a previous focus. How then are we to prevent adult death from tuberculosis?

At all times from the dawn of history, the highest function of the physician has been to guard those who entrust themselves to his care against the enemies of health, whether they come in the form of licentiousness, dissipation or disease, and for this service, mankind has always been willing to return a good compensation in both money and esteem. No man has ever been held in higher esteem in the world than he who could protect against impediment to health, who could ward off death when diseases had broken through the

lines of protection, and who could give relief from pain and disquietude. In no disease in the whole field of medicine has the physician a better opportunity of increasing his value to himself and his usefulness to others than in tuberculosis. In no field can he give a better return to his clientele for the money which it pays him, and in no field is the money more willingly paid.

Exact, accurate knowledge of the prevention of tuberculosis is at present highly appreciated by every one, and intelligent help toward recovery is prized and gladly paid for by every victim of tuberculosis. What the public thinks about such advice and assistance, and the value which it places upon them is indicated by the millions of dollars which it pays to quacks and mountebanks for things which have no value, but which are held out in the lime-light of advertisement as capable of accomplishing the results which are desired.

Few physicians appreciate and realize that there is both a duty and an opportunity for them in the prevention of tuberculosis.

The medical profession as a body has in its power immediately to control the spread of tuberculosis, and to collect a good revenue from the public for doing it.

In the light of our present knowledge every tuberculosis subject who has become contagious can be made non-contagious through certain practices which are within his ability and which usually, with the assistance of available philanthropy, can be brought within his financial reach.

Were every tuberculous subject made non-contagious, no new cases would spring up and the disease would become extinct with the termination of the cases now in existence.

To be able to make a consumptive feel that he is not endangering the lives of those who are near and dear to him, and to be able to make those who are near and dear to the consumptive feel absolutely secure against danger of infection in their intimate relations with him, is a power, the value of which, when exercised, cannot be represented in dollars and cents. This power should be in the hands of every physician and is not, because of the slowness with which truth and advanced knowledge filter through our medical schools and our medical journals into the rank and file of the profession.

To be able to make a consumptive non-contagious is simple enough to the man who fully understands the subject and who is willing intelligently to direct his patient.

RADIUM IN SURGERY AND DERMATOLOGY.*

M. L. RAVITCH, Louisville.

I wish that I had not written the editorial on radium in our State JOURNAL for May. Had I not written it I might have worked up imaginary effect and reported wonderful results of radium therapy and would have shown our profession that our lack of real medicinal remedies can be replaced by this cure-all metal.

It is really pitiful to see our despair when it comes to therapeutics. We are ever ready to abandon our favorite remedies for imaginary new ones.

How did the therapy of radium start? Because Becquerel, in carrying a small piece of radium in his vest pocket, observed about a fortnight later a severe inflammation of adjacent skin, the first demonstration of radium's caustic and destructive action was brought forward.

Since then its applications and uses have been numerous. It was used for everything from corns to consumption with the alleged wonderful results,—if we could believe all the reports and articles written.

I do not doubt that among the numerous experimenters we have a few earnest investigators who carefully, painstakingly and scientifically observed the action and effect of radium. Great things may be expected from these earnest observers, and I am glad to notice that the most enthusiastic investigators such as Louis Wickman and Degrais in France, and Abbe in this country have not lost their enthusiasm, though they have modified their claims and become more conservative in regard to therapy of radium. Wickham, the master of all of them, in his latest publication admits that radium does not cure deep-seated malignant tumors, that it is only a useful agent as far as to relieve pain, and insists that "operable cancers should be operated upon without delay. This should be an absolutely fixed rule."

In the radium institute of London, the second of its importance in Europe, where hundreds of patients have been treated, none of them have been reported as cured. Apparent cures are mentioned in benign forms of cancers, 30 per cent. of cases, while in malignant forms the reports are not very favorable. The same statistics can almost be duplicated in the Vienna hospital, and in the Samaritan hospital in Heidelberg.

Surgery, medicine and particularly dermatology, have expected great therapeutical properties from this precious metal, but all

these three branches had to fall back on their oft-tried and partly successful methods and agents.

Looking over the literature of radium therapy, we find that its use and applications can be limited to few diseases. The most successful results were obtained in treating skin cancers, as the majority of enthusiastic followers of radium lay claim; but skin cancers are of such minor importance, that with perfect technique the knife, electro-cautery, suitable caustic and karatolytic agent will do just as good work in a shorter time and with less expense. As to the cosmetic effect, on which the radium followers lay particular stress, I get just as fine cosmetic effect from the use of the electro-cautery. Supplemental use of X-ray, if occasion demands, is, at times, advisable but in very few cases.

On account of its destructive action on the tissues, particularly of cancerous nature, radium has been used in the following successive line: mycosis fungoides, lymphadenomas, tubercular adenitis, sarcomas, epitheliomas, angiomas, naevi, lupus vulgaris and erythematosus, rhinophemas, keloids, scars and acne rosea. I named only these few diseases because the majority of experimenters claim that they have obtained success in these particular diseases from radium treatment; while in many other diseases, in which radium has been used, the results seem to be purely imaginary.

I will take up the few diseases that were mentioned above. Of the use of radium in skin cancer I have already spoken. In superficial skin cancers it was used with some success, but in deep-seated malignant growth no good results, but only disappointments were obtained. True, some enthusiastic followers of radium, such as Exner, were able to trace histologically the retrogression of carcinomatous nodules in the mamma, larynx, pharynx and nasal passages, but even such an occurrence was rather rare. Isolated instances of apparent cures of malignant cancers are, at times, heard of, but to my mind, there was never a complete eradication of the ultimate ramification of the disease, though there might have been an apparent retrogression of the primary site of the tumor.

Tubercular adenitis does not respond to radium even if it is employed for a long duration. Surgery is more efficient and practical. Lately massive doses of X-ray have been applied with great success.

In keloids and scars (particularly on the neck) some claim for radium better cosmetic results than from an operation. Operation, it is claimed by radium followers causes formation of larger scars on the site of the ones that were removed. But it should be remem-

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bered that the removal of keloids and scars should be entrusted to surgeons who devote themselves to plastic surgery. Radium therapy, if it does give good cosmetic results must be used for a very long period. Such treatment is rather prohibitive on account of the time and the great expense involved. X-ray in such cases is quicker more active and less expensive.

Angiomas should be divided into two groups: small ones or naevi vasculosi and bloody tumors which are liable to great loss of blood. In very extensive angiomas we should use the method "feu croisé," i.e., to place the tumor between two blades (clamp like) pointing towards each other. It should be remembered that angiomas in adults do not yield to treatment as easily as in children. While angiomas seem to yield to radium treatment, it must not be forgotten that sometimes Kromayer's lamp, electrolysis, hot air and even the knife give splendid results; but where angiomas are too extensive and the danger of bleeding is imminent, radium is useful, but here again we meet with its chief drawback,—the length of time required for treatment.

Pigmentary naevi do not yield to radium treatment as well as angiomas do. It is a tedious and unsatisfactory procedure.

In lupus vulgaris radium is rather useless on account of the length of time it takes; it requires at least one hundred hours to make any perceptible impression upon the disease. Electric or Paquelin cautery is far superior. Pinsen light was found far more useful in lupus, particularly in the manifold lupoid nodules.

In lupus verrucosus the action of radium was found to be too weak. No results were obtained in lupus erythematosus.

On the other hand, in lupus of the mucous membranes, radium was found to be an excellent remedy.

I do not believe that radium can be of any use in mycosis fungoides, the disease being too extensive in area and too formidable for the practical use of radium.

The rectal surgeons have tried to apply this remedy in pruritus ani, while gynecologists used it in pruritus vulva, but the dermatologists, who mostly handle the above diseases, have found X-ray far superior.

Some radium enthusiasts claim that radium has given them beautiful results in acne rosea and rhinophyma, but if these statements were true, our late Mr. Pierpont Morgan, who suffered from rhinophyma, would have cornered all the radium out-put in the world.

In pappillomas and warts the influence of radium was supposed to be very good, but who, in this wide world, would dare to apply

such a precious metal to such a common thing as a wart.

While radium was principally and extensively used in dermatology and surgery, yet it must not be forgotten that it has also been tried in general medicine. Radium emanations in all forms and devices have been used in faulty metabolism, in certain forms of arthritis and other conditions, but it seems to me that its use in such cases have been more of a commercial exploitation than of a scientific basis. Stored emanations of radium in glass tubes, metal rods impregnated with radium emanations, waters charged with radium emanations and other devices of canned radium have been brought forward, but all such things smack of fakery.

In speaking of radium we must not forget to mention mesothorium. But Fred Soddy was right when he said that "five minutes application of radium is equivalent to ten years application of mesothorium."

What is, then, the present status of radium in therapeutics? We have no real status as long as we do not understand fully the emanations and radiations of radio-active bodies. As I said in my editorial on radium: "a variety of theories have been offered to explain its peculiar properties. Some scientists declare that radium is a source of earth-heat and that it is probably of the same substance as that of the sun, since it is known to emit certain gases of the same vapor as given out by the sun. Much of the speculation among the therapeutic values of radium have been found unwarranted by actual demonstration, but that it will some day be found a very useful agent, can not be disputed.

Surgery, if justifiable, offers at present the best and surest method of handling malignant cases."

DISCUSSION.

Curran Pope, Louisville: I expect that there has never occurred a more interesting story in all the world of science, and science has its fairy tales, than the fairy tale of radium. It was one of those scientific toys at the start that appealed in a singular manner to the emotional side of the individual. Like everything of that kind, like tuberculin and like the X-ray, it was going to revolutionize the world, to eliminate pathology and enable the physician to control the secrets of life. To those of us who have no tendency toward philosophic thinking, such an attitude as regards radium absolutely presaged the "pride that goeth before destruction," and so it has been with radium. If radium had lived up to one-tenth of its reputation at the start, it would be to-day one of the most marvelous of the various radiations that we have at the present time to use in medicine.

Radium depends largely for its therapeutic ef-

feet upon the use of gamma radiation, that radiation that is allowed to pass through aluminum. I believe where the radiations of radium are filtered by aluminum we get the gamma rays, and it is the gamma ray that possessed therapeutic value. The other two are too soft. Their wave lengths are too long to be of value in anything save the most superficial of conditions. In other words, we may reasonably liken the Alpha ray to an exceedingly soft X-ray tube, a tube that nobody to-day would use. A Beta ray to a moderately soft tube and a gamma ray to a hard X-ray tube.

The use of radium in superficial conditions has to my mind been practically relegated to the rear. No one would think to-day of using radium when the X-ray technic has been worked out to such an extent that we can almost with certainty depend upon the X-ray for superficial conditions or upon the actual cauter, as Dr. Ravitch has stated, but if we had a method by means of which the gamma ray of radium would have the penetrating power of the X-ray tube; that is to say, if we can by proper protection of the skin possess a gamma ray of radium that would penetrate deeply, we would then have a therapeutic method that would be of enormous value probably, in that even, combining the value of the hard radiation from the X-ray tube with the therapeutic value of the hard or gamma from radium. There is every prospect at the present time that this hope will be fulfilled. Dessereaux has in a recent communication informed us of the use of a new X-ray tube, energized from a transformer, selecting only the crest of the transformer waves, by means of which he could get a special X-ray tube that formed rays that possessed the hard penetrating value of the X-ray, and at the same time respond to all of the physical and other tests of the gamma ray of radium. If this is true, we are then really having an era opened up to us of radium therapeutics in a cheap way. Radium is to-day the most expensive mineral, so expensive in fact that no one but institutions that are richly endowed or hospitals that are richly endowed can afford to have what might be reasonably termed a decent radium outfit. It would be a wealthy individual that would want to carry sufficient radium to carry on proper radium therapeutics, but if we can for a few hundred dollars make a tube that will possess all these values, then we will have made a step forward, and one which promises greatly for the future.

There is no question but what radium has some value, but it is extremely circumscribed; whereas the tube, such as Dessereaux is working upon, and which he presented to the Congress offers a wide field for application, and with it I believe he makes the claim of a very powerful deep-seated effect. In fact, the field to-day of deep therapy that is being offered by the tube of another investigator, which is a very remarkable discovery,

ought to be credited to an American electrical engineer, working at Syracuse in the general electric laboratories, a new tube that enables us to practically control the radiations for deep therapy.

James O. Jenkins, Newport: It is almost presumptuous on my part to say anything on radium after such an elegant paper as Dr. Ravitch has presented to us. I have only used a small portion of radium, not sufficient in quantity to do any good excepting in superficial conditions. I believe it will cure superficial cancers. It will cure epitheliomas if confined to the lips and face, and I do not think I have had any failure from its use.

I believe, as the essayist and Dr. Pope have just remarked, that there was a great deal of psychic influence in the adoption of the remedy in the beginning, but its value as a therapeutic agent from all the information I can gather and from my experience is that it is successful in the cure of some cases of malignant disease. The great trouble about the remedy is its expense. A small quantity is of very little use, and a large quantity will exhaust the financial resources of the Kentucky doctor unless he is more affluent than most of us. Less than a gram cannot be expected to accomplish much good in a deep-seated condition. In Europe and also in America where a quantity of it has been secured, and a proper technic developed, and the proper filters used, something has been accomplished in deep-seated conditions. Dr. Freude, of Strassburg, has effected a permanent cure in carcinoma of the rectum. Eight months afterward there developed a nodule along the lumbar spine. He made a section of the abdomen and rayed the nodules effectively causing their disappearance and a cure the case having been surgically inoperable. Others have reported numerous cures from the use of radium. It seems to possess value in deep seated cases. Beck, of New York, has used the X-ray to the exposed neoplasm. The adoption of filters to eliminate undesirable rays is one of the technical steps in using radium. That requires calculation as to the patient and calculation as to the variety of ray you are using, the length of exposure, and the estimation of radium rays at your disposal. With all this, radium does not possess that ready adaptability to general practice that other well-known and tried remedies do. The X-ray is efficient and is within our means, it is not expensive, and can be applied in a small hospital. The reason why so many surgeons have given up the use of radium is because of its expense, as well as its lack of adaptability. The very small hospital or the men who are away from large cities or towns are deprived of the use of the remedy. It is costly to the patient; therefore, it is not economical, and taking it altogether the difference between the availability of use of radium and other well-known remedies that we have at hand is not in favor of radium. Later, perhaps it may be placed upon a more

available basis. In that case I believe the remedy is a good one.

M. L. Ravitch, (Closing): I wish to thank the gentlemen who have discussed by paper. Their views are in accord with my own. I agree with Dr. Pope that the rays of radium are not identical with those of the X-ray, and those who are working with radium and the X-ray know that. The nature of the burns either with the X-ray or radium prove it.

I have not been so successful as Dr. Jenkins has in the treatment of epitheliomas of the lip or face. He made mention of undesirable rays, but we do not know anything about which rays are undesirable or desirable. Until we find the true nature of different rays, at present it is all speculation. Four or five years ago radium enthusiasts thought the Beta rays were less irritating and the most useful. Last year Abbe and Carroll found the gamma rays were the most useful ones and the least injurious, while the Beta rays were not so effective and useful.

PERIODIC EXAMINATION OF SUPPOSEDLY WELL PERSONS.*

By EUGENE LYMAN FISH, New York.

DIRECTOR OF HYGIENE, LIFE EXTENSION
INSTITUTE, NEW YORK.

This principle of periodic inspection of the human mechanism, which appeared so radical a few years ago, has now become widely accepted as almost axiomatic.

Two of the largest life insurance companies in the world have extended this privilege of periodic health examination to their policyholders. A number of the smaller, but not less conservatively managed companies, have done likewise, apparently well convinced that the saving from reduced mortality will more than cover the expense of carrying on the work, and afford a business justification for these measures, fundamentally designed to improve the vitality and well-being of policyholders.

Employers of labor are also extending these privileges to their employees, with the same purpose in view, viz.: improving their vitality and well-being, the business warrant for the expenditure lying in the increased productiveness of the working force, and the better quality of the work turned out. In many communities general inspection of school children is now practiced but not yet with sufficient thoroughness.

Banks, trust companies, department stores, widely diversified industries, and individuals acting in their own behalf, are moving in this matter. This remarkable growth of sentiment

has taken place largely within the past two years. In fact, this practical, effective, and far-reaching influence for human betterment, has spread with a rapidity seldom attained by movements for racial improvement. The explanation lies, not only in the fact that it appeals to common sense, but that it contributes to the welfare of all concerned,—employer, corporation, employee, and society in general.

It is likewise a most powerful influence for adjusting the practice of medicine to modern requirements, and for increasing the scope and value of the physician's work, as it constitutes him a custodian of individual and public health, rather than a mere emergency man, who is too often called in too late to render the most effective service.

Apart from a few nervous neurologists, and well-meaning, but utterly misinformed representatives of organized labor, there is no sentiment in opposition to the plan.

The nervous neurologist suggests that a man who is in the early stages of a chronic malady, and drifting along without medical supervision, because he has no symptoms and is unaware of his true condition, should be allowed to drift until the malady reaches a stage when it announces its presence, possibly by uremic convulsions or cerebral hemorrhage.

According to such view, it is better for a man to receive his warning when it is too late, lest his mind be disturbed by receiving it too early; lest his health be injured by intelligent medical supervision, designed to check the progress of his malady, or lest his mind be disturbed by depriving him of some of his pet indulgences or injurious habits, and thus warding off even the early stages of disease.

Such views are not, of course, widely held by neurologists, and, I believe, there is a reaction against the over-emphasis of mental suggestion and purely psychic factors in the causation of disease, which is well expressed in the writings of Lugaro. We must recognize body poisons, as well as mind poisons, and beware, while we are "psych-analyzing" for submerged elements in the sub-conscious stream, that we are not overlooking sub-infection from a gall-bladder, or intestine, a blind dental abscess, a seminal vesiculitis, a visceral ptosis, or some other material focus of disease.

As for the labor sentiment against periodic examinations, it is not widespread, but simply reflects a fear that the "weak brother" will be discriminated against, and also evidences a total misapprehension of the spirit and the motive underlying these activities. It is not the weeding out of the sick or of the unfit that is contemplated in this movement, but the raising of the general level of fitness and well-

*Read before the Kentucky State Medical Association, at Newport, September 22-25, 1914.

being. The frankly sick have for years been weeding themselves out, while under this new system sickness is not only prevented, but the unfit are given an opportunity to improve their condition,—in many cases, given the kind of employment to which they are adapted, if they cannot be physically adapted to the work they are doing.

I do not know of a single instance in which a corporation taking the service of the Life Extension Institute has discharged an employe because of the results of his examination, but I can say, most positively, that in every establishment that has taken such service there have been numerous instances of help extended to employes in bettering their condition. Leaves of absence have been granted, and efforts have been made to give employment better adapted to the individual, and those found impaired have been counselled with and urged to take the proper measures for the improvement of their condition. For example, in a number of cases of hernia, operation for radical cure was arranged by the employer.

Most of us are more or less unfit. In one group of four hundred and fifty people examined, only eight were found who did not require some kind of advice regarding their physical condition or their manner of living.

I am not going to consume your time by any extended argument in favor of the principle of the periodic health examination, but rest the case with a quotation from Victor C. Vaughan's splendid presidential address before the American Medical Association in June last:

"If preventive medicine is to bestow on man its richest service, the time must come when every citizen will submit himself to a thorough medical examination, once a year or oftener.

"Science must discover the facts, and medicine must make the application for either cure or prevention."

Coming down to the practical details and suggestions relating to the actual work, I invite your attention to the following special aspects of this question:

1. Ideals, standards and methods.
2. Evidence derived from actual experience.
3. The practicing physician's opportunities and responsibilities.

A volume could, of course, be written under each one of these captions, and I can attempt to cover only the most important points.

IDEALS, STANDARDS AND METHODS.

In planning these periodic health examinations, our ideal should be to uncover the workings of human body, and to secure a complete picture of the mechanism, and of the conditions under which it exists. The total

value of a man equals heredity plus environment, plus physical condition, plus what he does. Plus or minus in any of these factors counts. In this photograph, as it were, of the individual as a whole, there may appear many features that we cannot, in the light of present knowledge, correctly interpret; our effort should be, nevertheless, to secure this picture; thought we may not be able to advise, we can, at least, study, and thus, entirely apart from the immediate value of these examinations to the individual, enormously increase their general value to science, and to mankind.

With the picture before us, we must then attempt a thorough valuation of the individual as a "going concern." It is not enough that we seek for pathological conditions; the working plan must be constructive, as well as protective. When we keep a man out of a sick bed, we have done a good thing, but we may not have added one jot or tittle to his average efficiency or well-being. Our aim should be to take the measure of the man, to ascertain how far below his best possible condition he may be, not only with regard to working capacity, but with regard to the capacity for living a well-rounded and useful and happy existence. A man may not be afflicted with tuberculosis, heart disease, or any other greivous malady, and yet be but a pale reflection of what he might be, with his physical handicaps removed, with his life adjusted according to the rules of personal hygiene, even as they are known now, in the rudimentary state of that science. With these ideals in view, we should endeavor to square with them the standards for carrying on the work. These standards, of course, must be modified, according to the available facilities and the limitations of expense, but it is most important that all who are doing this work should seek for certain fundamental things, and observe certain standard methods.

Dr. Schereschewsky, of the United States Public Health Service, who has been conducting the examinations of the employes of the cloak and suit trade of the City of New York, in cooperation with the Joint Board of Sanitary Control, has suggested that the Government establish a standard examination blank. While this may not be practicable, in view of the fact that the conditions and requirements are so varied in different industries, and walks of life, it is certainly possible to observe a reasonable degree of uniformity. Take the blood pressure for example: This is a most important feature, and should be included in any physical examination, however, brief and cursory. Both the systolic and diastolic blood pressure should be taken by the auscultatory method. The technic of this method is so simple that it can readily be acquired by a layman in a few minutes, and a competent phy-

sician who fails to acquire it is doing himself a great injustice.

In the examination of the urine, several standard tests should be employed, each as a check upon the others in order to accumulate data in studying the relative value and accuracy of tests. One of the weakest features in the clinical work of the average physician is the testing for albumin. Slight traces of albumin are practically always overlooked by the average practitioner and larger traces are frequently overlooked. This arises from faulty standards as well as faulty technique. Unless one has actually seen a slight trace of albumin revealed by careful test, a false standard of what constitutes a trace of albumin will continually vitiate the findings. Every practitioner should of course acquire the proper standards of technique, but when large masses of individuals are to be examined, it is best to have such work done at a central laboratory, where uniform methods prevail and the recorded results form homogenous data for study.

A gross test of the vision, with Snellen's types, which until American ophthalmologists give us a better standard, should in every conscientious general practitioner's office, should always be made. The color sense should also be tested, in occupations where this is a factor. The eyes, ears, nose, throat, glands and skin should all be scrutinized; hemoglobin test and in some cases a blood count, and the usual routine tests for the integrity of brain and nervous system applied. The arteries should be critically examined, no matter how youthful the subject. The general practitioner should be able to make such examinations and discern conditions that require medical attention or further expert examination, even though he be not competent to make a final expert diagnosis.

It should be borne in mind that these examinations are usually made for the purpose of ascertaining departures from the normal, and that, after the results are known, it depends entirely upon the conditions found, as to whether the individual shall himself attempt to correct them, or whether they shall be treated by the family practitioner or by the specialist. The main object of the examination is to get a true picture of the individual, and then it becomes a simple matter to determine who shall undertake the work of repair. In the Institute, the following routine is observed:

The applicant for examination is furnished a history blank, calling for information regarding his family history and personal history, living habits, dietetic habits, etc. This he fills out and presents to the physician assigned to make the examination. The examination covers the following features: appear-

ance, nutrition, height, weight, chest, girth, posture, rupture, flat-foot, varicose veins, spinal curvature, other physical deformities or asymmetries, temperature, pulse (character before and after exercise), blood-pressure by the auscultatory method (before and after exercise). The condition of the heart, blood-vessels, lungs, stomach, and abdominal organs, kidneys, genito-urinary and venereal, brain and nervous system, skin glands, nose, throat, mouth, teeth, gums, tongue, ears, eyes, other physical defects and impairments, indications for medical treatment, errors in personal hygiene, occupational disease or strain, possible exposure to consumption or other environmental influences.

The individual forwards a specimen of urine to the home office laboratory and it is there examined and the results considered by the clinical pathologist. All the data in the case,—personal statement, medical report, and laboratory report, are then considered by a general diagnostician, and the impairments in the case outlined for consideration by the director of hygiene. If the impairments are slight, and relate to errors in personal hygiene, these impairments or errors are reported directly to the individual. If there is an impairment requiring medical attention, with the patient's permission the family physician is notified and furnished a full report, including the laboratory findings, and the individual is requested to place himself under his doctor's care. Every effort is made to protect him from undue alarm or psychic shock, by telling him that the condition may be temporary, but that we believe it should receive attention.

These items cover a standard examination which can be made readily available to large groups of people. Other forms of examination range from a brief inspection to an examination of blood, sputum, gastric content and feces, and the Wassermann test can be arranged for individuals and groups that desire it.

The Institute strictly refrains from giving medical advice regarding the treatment of disease, and the applicant follows his own wishes in the matter of selecting his doctor. Where he has no physician, we urge him to select one and advise us of the selection, so that we may duly report. The Institute does not make a diagnosis in any case. It reports conditions and symptoms and the responsibility for following up these impairments and symptoms and forming a final diagnosis, rests with the attending physician.

Under the operation of this system, thousands of individuals, who would otherwise have drifted along unaware of impairment, have been referred to physicians and placed under

treatment, to their own advantage and to the advantage of the profession in general. Apart from the income derived from these cases, it is a matter of satisfaction for the physician to be called at a time when he can render efficient service and win the gratitude of his patients by restoring them to health, rather than by merely mitigating their sufferings.

As this system spreads, not only as carried on by the Institute, but as the public at large becomes alive to the importance of these periodic health examinations and insists upon having them, there is a probability that greater precision and refinement in diagnostic work, on the part of the general practitioner, will be demanded, and will prove a healthful stimulus to the study of diagnostic methods, and the detecting of incipient and border-line conditions. Likewise to the study of personal hygiene, or the art of living long and living well.

There is no reason why the general practitioner should not be equipped to make a careful health survey and determine whether special treatment or guidance be needed. To ignore certain regions of the body because one has not specialized in that region, needlessly limits and narrows the general practitioner's field; a patient's respect for the medical profession is not increased by learning, after he has passed through the hands of a number of physicians, that his trouble is caused by some physical defect or focus of infection that could easily have been revealed at the outset by a complete health survey, even by a general practitioner.

EVIDENCE DERIVED FROM ACTUAL EXPERIENCE.

While this work is as yet, in its infancy, sufficient data has already accumulated to give an adumbration of its great possibilities. One life insurance company has extended this privilege to its policyholders during the past five years. The mortality among those examined has been about half that to be expected according to a careful valuation of the risks with regard to their personal condition. About half of those found impaired were unaware of impairment. Making due allowance for the short duration of the experience and the small numbers involved (from an actuarial standpoint), a very definite life-saving influence was observed, although the system of examination had not been worked out with the thorough attention to detail that now obtains. Forty per cent. of those examined were found sufficiently impaired to require medical advice or supervision.

The work that the Life Extension Institute has done among industrial employes and corporations, as well as among insurance risks, shows that in any ordinary group of suppos-

edly healthy individuals, a surprisingly large proportion of impairment will usually be found. I have been tempted to present a detailed and complete analysis of this experience, but, inasmuch as the work is still young, I believe that comprehensive study should be postponed until broader experience is available. Nevertheless, we may say that these facts clearly stand out:

Among individuals in so-called preferred occupations critically examined in regard to their *entire bodily condition*, few will be found who do not present some departure from the normal, either in living habits or in physical condition. It is well to remember that a faulty living habit may be quite as serious in its influence as an organic defect. Steady, free drinking (not drunkenness) carries as heavy a penalty in mortality as certain valvular heart affections. Lack of exercise and over-eating may do equal damage. An aeroplane view of these conditions may be obtained by scrutinizing the following analysis of a group of one hundred and eight individuals, which may be regarded as an average commercial group.

ANALYSIS OF GROUP C-VIII, EXAMINED BY THE LIFE EXTENSION INSTITUTE.

	No.	Per Ct.
Examined	108	
Free from Impairment	3	02.8
Impaired (in condition or in living habits).....	105	97.2
Not aware of impairment....	94	89.0

IMPAIRMENTS—MODERATE TO SERIOUS.

Heart and Blood Vessels....	31	28.7
Heart, Blood Vessels and Urinary	21	19.4
Urinary	10	09.3
Lungs	4	03.7
	66	61.1

(The above group includes high blood pressure 31*, low blood pressure 2, arterio-sclerosis 16, sugar 2, albumin 30, mitral insufficiency 4, aortic regurgitation 1, doubtful heart signs 4, cardiac hypertrophy 6, doubtful lung signs 4.)

Number in this group not aware of impairment.....	63	95.0
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* Average age 34, average systolic 148, diastolic 85.

MINOR IMPAIRMENTS.

	No.	Per Ct.
Functional Circulatory.....	3	02.8
(Rapid, slow or intermittent pulse; slight variation in blood pressure).		
Urinary	29	26.8
(High or low specific gravity; Indican, oxaluria, etc.)		
Anemia	2	01.9
Impaired Digestion	7	06.5
Constipation	20	18.5
Nervous	5	04.6
Errors in Diet	76	70.4
Errors in Hygiene	66	61.1
Respiratory, Decayed teeth and infected gums	41	38.0

PHYSICAL DEFECTS.

	No.	Per Ct.
Eye Defects	15	13.9
Ear Defects	14	13.0
Nose and Throat	26	24.0
(Tonsils, adenoids, turbinates, deflected septa).		
Flat foot and faulty posture	7	06.5
Hernia (No truss).....	2	01.9
Overweight	12	11.1
Underweight	31	28.7
Miscellaneous	3	02.8
Advised to seek medical treatment	74	69.0

I do not maintain that these percentages would be constant for the general population; certainly a large number of frankly tuberculous subjects would be found in a less favorably situated group. Sweeping aside all debate as to the significance of many of the conditions found, e.g. very slight traces of albumin, moderate variations in blood pressure, etc., it will be of interest to exhibit the number of cases showing arterial thickening among those examined by our home office staff, who observed uniform standards and methods for determining this impairment.

A recent analysis of 4,000 insurance policyholders who had been examined by the Institute, showed the following results:

Unimpaired	11%
Slightly impaired	30%
Moderately impaired and advised to seek treatment	57%
Seriously impaired	2%
Unaware of impairment	93%

STATISTICS OF ARTERIO-SCLEROSIS.

Of 1686 individuals examined by the *Home Office Staff* of the Institute 13.2% showed arterial thickening or arteriosclerosis.

Of this number 86% were unaware of impairment.

The average age of the cases showing arteriosclerosis was 38.

Those showing arteriosclerosis were distributed by age periods as follows:

Under age of thirty	32%
Ages thirty to forty	27%
Over forty	41%

Average age of entire group, 37.

Cases of Arteriosclerosis also showing albumin, 41%.

Cases of albuminuria in entire group, 31%. General arterial thickening is a positive structural condition, and there can be no debate regarding its unfavorable significance, especially in subjects under forty years of age. It is a pathological condition at any age, and the disposition of some clinicians to regard arterial thickening in men past fifty as a more or less physiological process is regrettable, and sets a poor standard for humanity. Such *laissez faire* views will not help to stem the tide of rapidly increasing mortality from cardio-vascular diseases at middle life. If these examinations uncovered no other condition than this existence, among so large a proportion of young people, of degenerative, or rather, regressive changes, the work would easily be worth while.

While the anti-tuberculosis crusade has done excellent work in encouraging and bringing about a sentiment for periodic examination, the other pathological conditions and physical weaknesses that may be uncovered by this system far outweigh in importance even this dread malady.

When so large a proportion of young people among those examined by the Life Extension Institute, were found with these arterial changes, the examiners' findings were very carefully reviewed, and, in doubtful cases, the subjects were re-examined and the condition carefully checked by other observers, and the findings confirmed in each case.

Regarding the causation of these troubles, we cannot, as yet, express any dogmatic opinion. A close study of a very large number of cases is necessary, and will, in due course, be made. There are many influences at work. Lack of exercise, faulty diet, tobacco, alcohol, and, in some cases, congenital conditions, afford, at least, a partial explanation. A number of young office-boys were found with thickening of the arteries. Possibly, as Osler puts it, these unfortunates were "born with poor tubing."

THE PRACTICING PHYSICIAN'S OPPORTUNITIES AND RESPONSIBILITIES.

The rapid spread of this system will put the medical profession to a severe test. Even now, there are pessimists, who say: "Suppose you do uncover all these disabilities and impair-

ments—is the medical profession competent to deal with the situation and materially influence these lives? Will the result pay for the time, labor, and expense of carrying on the work?" Our answer is that we have staked the success of this movement among business men and the public generally on our belief that the profession as a whole will give evidence of its modern scientific equipment and of its greater efficiency in dealing with incipient troubles than it has been able to demonstrate in dealing with advanced disease. Even among the profession, however, there is a great deal of missionary work to be done. The old easy-going attitude, that of slapping a man on the back and keeping him in good humor until medicine or the knife is needed, must be abandoned. We must be prepared to turn him away from injurious living habits and give him good ones to take their place. When a man is referred to a practitioner, with a report from a responsible source that he presents certain disabilities, the too common impulse to find that the other fellow is wrong should be resisted, and a close study made of the individual's trend.

Many impairments are shifting and ephemeral but their presence in the history may well lead to a wise modification of living habits and more emphatic laying down of the law regarding healthful living and personal hygiene, even though organic disease be a remote possibility. Patience, judgment, tact, discretion, a deep human sympathy are needed to make the work effective. These qualities which have been so abundantly manifested by our profession in its ministration to the sick and suffering must now be exercised in the prevention of sickness and suffering and in guiding men into higher pathways of health and happiness and achievement.

SUMMARY.

At first glance, some of the figures I have quoted may seem depressing, and raise grave questions as to whether the race may not be on the downward trend. I think we should take the opposite and optimistic view. On the whole, the world, as we view it in passing, seems pretty good (if we temporarily exclude the continent of Europe), and the average man is a pretty decent fellow. The fact that an ordinary group of people, at an average age of 30, taken, not from a hospital, but from one of the leading business institutions of the world, is found suffering from so many disabilities which can be corrected, checked or cured, points a way to sensible, practical, and easy methods of distinctly raising the general level of the vitality and well-being of the race, which so many people, even life insurance experts, have thought was a fixed and unalterable quantity. The study of eugenics, and the

utilization of this science, in a conservative, rational and scientific way, to neutralize any possible ill effect, on society as a whole, from patching up the congenitally defective, should of course go hand and hand with the work. It should be remembered, however, that while saving the unfit, we are also improving the so-called fit which is a powerful influence in keeping ahead of the game. Indeed, if we have faith in medical science, we are able to see a vision of the superman,—not as Nietzsche conceived him:—a ruthless overlord—but, as Bayard Taylor viewed him, gentle, as well as daring; tender, as well as brave. Let us look then, not upon the dark picture of *present degeneration* but upon the bright picture of *future regeneration*, made possible by an intelligent and determined use of a larger and more accurate knowledge of man's weakness and capacity for wrong doing.

DISCUSSION.

W. B. McClure, Lexington: The essayist spoke of blood pressure, and I would like to ask him what he considers a dangerous blood pressure, either high or low.

E. L. Fisk: A dangerous blood pressure?

W. B. McClure: Yes, or pathologic.

E. L. Fisk: That is something that should receive attention. In giving a rating in that case one would be governed somewhat by the age. I am speaking generally.

W. B. McClure: Would you consider a man with a high or low pressure as a pathologic subject?

E. L. Fisk: The practice, for example, among life insurance companies has been to consider the lowest one about one hundred and fifty regardless of age. The practice they are coming to now is to take the average blood pressure at different ages, and so far they have analyzed forty thousand cases. It ranges from twenty-five to twenty and from fifteen to twenty-five. The average blood pressure would be one hundred and nineteen systolic. Any pressure fifteen millimeters above the average for the age is now looked upon with suspicion and by one company that has studied the cases more carefully is good ground for rejection. In other words, a man, twenty years of age, who has a blood pressure of one hundred and thirty-five, is the subject of suspicion, and so on up. The average blood pressure from fifty to sixty years of age is one hundred and thirty-four. At fifty-five a blood pressure of one hundred and fifty is on the border line. That is the time when we should give our attention to blood pressure. When we get it to two hundred and fifty you know what trouble we have with it. The time to take blood pressure is when it is one hundred and thirty-five in a young man or a hundred and fifty to a hundred and sixty in an elderly man.

I spoke of diastolic blood pressure. That is

more important than systolic because it is more frequently an evidence of organic change. A man may have a systolic blood pressure from some evanescent cause, but if the pulse pressure difference between systolic and diastolic is markedly affected, there is a probability of organic trouble. There is a great deal of obscurity and lack of information among practitioners on this subject. They do not take the diastolic pressure as often as they should. There should be a uniform standard. When the pulse pressure is below twenty or fifteen the patient is in danger. The pulse pressure should be twenty to forty. You rarely see a pulse below twenty. When it goes below twenty-five it is a bad sign.

J. W. Kincaid, Catlettsburg: I would like to ask Dr. Fisk if any observations have been made of female risks to arrive at a conclusion as to the variation between them and male risks?

E. L. Fisk: About ten millimeters lower in the female than in the male.

Dudley S. Reynolds, Louisville: I want to invite attention to the necessity for more painstaking care in making examinations, not only for life insurance, but of all of our patients as we go through the daily routine. Life insurance companies require a kind of examination that would take a competent examiner from an hour and a half to two hours or even more to conduct and complete it. Some of the insurance companies pay two or three dollars only for an examination. It is perfectly certain, no matter who the examining surgeon may be, a company that pays less than five dollars for an examination is not going to be protected, because the examiner cannot afford to put in the time required to make a thorough examination for any such fee as that. We are too much in the habit of asking our patients what is the matter? We never find out by that method. The late Professor Larrabee, of Louisville, whom you all recognize to have been a very unusually accurate diagnostician and skillful practitioner, said he adopted diseases of children as a specialty in practice, because a child could not tell him lies, and try to deceive him. (Laughter.) It is not fair to say that a person who tells you something that is not true about his condition is guilty of falsehood; he is usually guilty of ignorance. He has a prejudicial notion of his condition; he imagines he is in a certain state, and if you rely upon what he says you will be misled.

Now, in studying the vascular system, the heart sounds alone, are not sufficient. The quality of the pulse and its rate are obtained with the patient in a recumbent or sitting posture alone, which affords a poor indication of the character of his heart action. The pulse rate should be carefully noted in the sitting posture, or recumbent posture, and in the standing posture, where it is practicable. People in bed with diseases, disabled from sitting up or assuming the erect posture, cannot be subjected to these methods of

examination. More painstaking care is the point I want to make, and that has been impressed upon us in Dr. Fisk's paper and his illustrative table. That indicates the kind of examination always necessary in a life insurance applicant. Can you make it in less than an hour, or in some cases, in less than two hours? I doubt it.

W. W. Anderson, Newport: Just a word. I think doctors in the handling of patients in the daily routine of work should cultivate in them the idea of the necessity of frequent examinations when they come to them for treatment or consultation and should explain to them the importance of these frequent examinations. I have done it with some degree of success by calling attention to the fact that most intelligent people go at least once a year to the dentist to have their teeth examined when they have no toothache or symptoms of it. It is perfectly possible to acquire a second or third set of teeth, but you can never get another set of kidneys, and if you allow them to become seriously damaged, that is the beginning of the end. If a greater proportion of doctors would do this, it ought to make it easier for us to get the people to submit to an examination of more important organs than the teeth.

E. L. Fisk, (Closing): With reference to the remarks made by Dr. Reynolds as to the time required for making these examinations, they take on an average half an hour, when the examiners are trained to do the work. The work is simple, but the neglect of the average practitioner to make this general health survey a routine with his patients sometimes causes him to consume an hour or more until he becomes familiar with such a routine.

These examinations are different from life insurance examinations. They are intended to reveal every ascertainable defect a man may have, however slight, whereas in a life insurance examination you are engaged in getting certain evidence which will enable the medical director to determine whether the risk is acceptable or should be declined; to separate the "sheep from the goat"; to draw the line between "good" and "bad" risks. While this should be done more thoroughly than at present, medical selection has not yet developed to a point where it can fully utilize the mass of information that we seek in these health examinations, especially regarding diet and personal hygiene. These examinations are for the purpose of detecting a man's defects whether of the body or of the living habits, and of affording an opportunity to correct them.

Let us cultivate the habit of examining the people who come to our office thoroughly, whether they are life insurance risks or not. Many neglected diagnostic methods are so simple that a layman can use them. Take the preliminary test for vision, for example. The blood pressure test by the auscultatory method can readily be taught to a layman.

When these careful standards are observed, we

shall get the people away from the quacks, charlatans and faith curers. They will come to the doctor because they respect him for the care and thoroughness with which he examines them.

Our aim should be to get into the game early, to detect disease when it can be checked or cured, and win the confidence of the people; to keep them under the guidance of scientific medicine, where they belong, instead of in the hands of quacks and even murderers.

RURAL HYGIENE AND THE SANITARY PRIVY.*

By C. W. SHAW, Alexandria.

To the rural dweller hygiene has a two-fold importance. Not only will the careful observance of its principles cause him to be more vigorous and more energetic in body and mind, and insure him a longer and happier life; but the improvement of insanitary conditions will enhance the attractive features of farm life, and will even render its hardships more endurable. Insanitary conditions, chief among which may be mentioned the repulsive and offensive privy, and the absence of the comforts and satisfaction of the bath, have driven to the city many boys and girls who would have been glad to live in a modern country home, and who would have been valuable additions to the life of the farming community.

In describing hygienic conditions as I find them, I shall do so with the hope that the farmer and suburbanite may improve their home surroundings. Being myself one of the rural dwellers, whatever I may say will be said with the kindest feelings. All rural homes are insanitary. This is a broad assertion, but I doubt whether we could find in this broad land one home that would give a perfect sanitary score. While some rural homes are very good from a sanitary viewpoint, others are as bad as it is possible for them to be.

In attempting the improvement of insanitary conditions, our object, of course, should be to prevent the growth and spread of pathogenic and other harmful bacteria, and this may be accomplished as well by the creation of conditions unfavorable to such growth and spread as by the destruction of breeding places already formed.

The work of the practical reformer along any line is beset with difficulties, but the obstacles in the path of the practical sanitarian seem almost insurmountable. Such a vast amount of prejudice must be combated, such a vast amount of ignorance must be overcome. And we may then encounter an in-

difference or inertia more despairing than either. After the question what may be done has been answered, the more important question What can I do must be brought home to the consciousness and the conscience of the individual. And after all, the vital thing is not what is known, but what is realized.

Carefully compiled statistics of health bureaus show that suicides constitute only a small proportion of the deaths arising from all other causes, yet we know that deaths arising from preventable diseases are not far removed from suicide itself.

In the cities, congestion has compelled the authorities to take up the matter of sanitation with a firm hand, but in the less closely settled communities of the country, where local sentiment and well-constituted authority are lacking, resistance is often met with in attempting the simplest and most necessary reforms.

Here it may be well to note briefly the argument, so called, often advanced by the laity, that hygiene does not accomplish the purpose intended, for the reason that people lived longer in the past than they do to-day. Here the importance of vital statistics is forcibly brought to our attention. That a man may live to old age in spite of bad sanitary conditions, is proved by the fact that 50 per cent. of those born at the same time die of preventable diseases. A man who celebrates his 93rd birthday has his picture in the paper, yet how many papers could be filled with the pictures of babies who are born at the same time he was born, who died from preventable diseases before they were one year old. Ask him, for example, how many of his boyhood friends have died of typhoid fever and tuberculosis. When the newspapers give the same prominence to the publication of deaths caused by preventable diseases as to those arising from accident, we shall hear little of the objection based upon the flimsy pretext above noted.

A healthy man, as a rule, is clean, and will have cleanly habits, and will take kindly to the practice of sanitary principles. But what of the weaker brother who is less energetic by reason of disease, and who, after all, is our chief concern? The very conditions which we wish to improve have deprived him of that energy so necessary in accomplishing sanitary reforms. A man living under such conditions may be unconscious of the fact that he is ill, and yet his energy and ambition may have been largely impaired in the constant fight which his body has been compelled to wage against the germs of disease. And in nearly every such case you will find a patent medicine bottle containing from 12 to 20 per cent. alcohol, which he constantly

*Read before the Kentucky State Medical Association, Newport, September 22-25, 1914.

resorts to as a bracer and a preventive; and yet he will likely be quite insistent in his claim that he has never been ill a day in his life.

Whenever we shall succeed in teaching the farmer to realize that a child known to be infected with cholera infantum, tuberculosis, diphtheria, or other preventable diseases, shows as clearly the ravages of destructive disease germs in that child's body, as does the potato plant stripped of its leaves indicate the work of the potato beetle, or a defective apple, the presence of destructive larva, we shall have removed the greatest obstacle to effective hygienic work.

The farmer knows how to destroy the potato beetle, the scale insect, and the parent of the fruit-destroying larva. Let him also learn that with our present knowledge of sanitary science, disease can be prevented quite as effectively. The farmer knows how to produce perfect red-cheeked apples. Would it not add to his credit to be able to rear healthy, red-cheeked boys and girls?

From an hygienic standpoint, the farmer and his family form a distinct community in themselves. The sanitary conditions of his farm are what he makes them, and no man will make a successful sanitarian unless he has learned to appreciate the advantage to be derived from the observance of hygienic principles. I know a farmer who moved his barn to a distant part of his farm, and was surprised to find that he had no flies about the house. He did not realize that his premises could have been freed from the vermin years before by screening his stable, and by properly caring for the manure.

We may compel a man by law to build a modern sanitary stable for his cows, but unless he co-operates with us in a determination to produce good milk, we shall accomplish little. And while we may compel him under penalty of the law to build a sanitary privy, he will neglect the proper care of it unless he realizes that such careful use will afford protection to his water supply, and thus prevent typhoid fever and other diseases in his family.

While the rural dweller must be educated in matters of hygiene, the use of technical terms should be avoided in our presentation of the subject to him, as their use may discourage practical work upon his part. Long before much was known of bacteriology, and still longer before sterilization in the operating room was practiced, the housewife in the canning of her fruits and vegetables used a system of sterilization, the technic of which would do credit to many hospitals to-day. The word "certified" as applied to milk has a mysterious sound to her, and yet it means

no more than clean milk, and with the same care she uses in her preserving, the milk from her dairy would show as low a bacterial count as "certified" milk, and she could thus provide the children with that important food in a purer form.

The problems in rural hygiene usually begin with the dwelling house itself. Very few dwellings are constructed with any regard to sanitation. The site of the building is usually selected for reasons other than those of healthful surroundings. A good location is often spoiled by building the house too near the ground on a bad foundation, and often the drainage will be found to flow toward the house, which will be damp, and the rooms and closets of which will have a musty odor in wet weather.

Shade trees are insanitary in-so-far as they shut out sunlight, the great natural destroyer of germ life. Nor should they be so near the house as to interfere with the free circulation of the air, and cause pollution of the water supply by choking the water pipes with falling leaves and seed pods.

The question of ventilation is often left out of the plans when building a house. In many houses sufficient openings are not left for this purpose, and the ceilings are too low. Many houses are built a story and a half in height, and the upper rooms in such houses are almost invariably unfit for habitation. If such rooms are used at all, the windows should never be closed, and the doors should be left open if the room is used as a bed room. The old open fire-place, a former means of ventilation, has been replaced by the air-tight stove. At the beginning of winter the doors and windows are closed, and the air is hardly changed once in twenty-four hours. I have returned to a house of this kind the day following my first visit, and have been able to detect the odor of drugs used the day before. To say that the occupants of this house will have colds, is merely to predict a certainty.

The cellar is a store-house for most of the winter food in the rural home, and the milk, butter, potatoes, cabbage, apples and other vegetables, sound and decayed, will be found stored in one room. This is not hygienic, even if the cellar is good. The cellar should be constructed or finished with good cement, and it should be kept dry and well ventilated. Decayed material should be removed at once. Milk and butter, if kept in the cellar, should be placed in a separate room so as not to absorb odors from other food.

A rural home should be modern, convenient and attractive, and should have a bath and a water system. To care for the nerves of the farmer's wife is hygienic. Too many of them are inmates of an insane asylum, and

many more are nervous and physical wrecks. Much may be done by sanitation to relieve the isolation and loneliness of farm life.

The small towns and suburbs outside of the jurisdiction of a large city give a health officer most of his trouble. Soil pollution is practiced to an alarming extent. The sewage and drainage for a modern house often flows into a badly constructed and small cess-pool, and must flow off into a nearby ditch or stream, which we will find at times to be flowing full of pure sewage. The co-operation of the people in these localities is harder to obtain than that of the people in the hook-worm district, and they pay less attention to sanitation. When an outside privy is used it will be found to be overflowing, and at all times the source of contamination of a near-by well or cistern, and will often seep directly into the cellar.

As we are beginning to depend on the farm dairy more and more each year for our milk supply, the condition surrounding these barns in rural communities, is of great importance to the health of the whole country. The average barn and barnyard are the filthiest of all filthy places. The cattle stand in, and are plastered with manure all winter, the yard is badly drained, and the farmer wades in manure in going to and from the barn, and carries it to the house and milk room. The dairy barn on the farm must be radically changed before we can get good milk and butter. Eighty per cent. of all butter sold to country stores is not fit for food, and much of the farm milk is bad. The farmer who ships milk to the city should be subject to the same rules and regulations that govern the large dairymen, and such rules and regulations should be strictly enforced.

Large cities have come to realize the value of good pure water and are spending millions of dollars for filter beds and purifying plants. The purity of the water supply is of the same importance to the country home. Many of our recent works on hygiene and sanitation have copied from older works, and have placed water from deep wells and springs at the head of the list as pure and wholesome drinking waters. This is a dangerous teaching, as it is almost impossible to find a spring or deep well in this country that is not contaminated with sewage. Almost all cisterns as now constructed are infected, and while concrete is being used extensively for cistern tops, we will find many defective coverings. Vessels with the discharge from the bowels of typhoid fever cases are often washed at the cistern, by pumping water into the vessel, and I have known typhoid fever to be spread and an epidemic to be narrowly averted as the result of this careless practice. It seems

that if there is one place about the premises where the privy will drain most readily into the water supply we will generally find it there. A water supply should be pure, wholesome, and plentiful in order that water drinking may be encouraged for its hygienic benefit. Stored rain water carefully collected in a properly constructed cistern, is the best water supply for the country home. The first part of any rain should not be used for storage for two reasons: First, the roof or other means for collecting water will be covered with dust and filth carried there by wind and birds. This should be thoroughly washed away before the water is allowed to flow into the cistern; Second, at the beginning of the rain the air will contain dust, bacteria, and other impurities, such as gases, which will be washed down or absorbed by the falling water.

The cistern proper should be constructed of cement, and should be tested for leaks from the outside as well as from the inside, just as carefully as a plumber tests a gas pipe. It is of the same importance. The opening should be covered with concrete material in such manner as to make side contamination impossible. The supply should never pass directly into the main basin, but should be collected in a separate basin, and made to pass through a sand and gravel filter into the main basin. The cistern should be well ventilated, and the overflow pipe properly protected, and not allowed to empty into a sewer.

It is a deplorable fact that many of the insanitary conditions that confront us in the home are multiplied and intensified in most of our rural schools. Hygiene as taught by the majority of teachers has not given satisfactory results; and it is in this field that the health officer may perform a most important work by visiting the schools, and by giving lectures and demonstrations, in order to awaken an interest in sanitation, and by otherwise aiding the teacher in presenting the subject of sanitation in an interesting and practical manner.

Much may be done by proper instruction in the schools to counteract evils in the home surroundings. The child should be clearly shown the relation of oral hygiene to the general health, as well as the disastrous effects of constipation upon his constitution. Even in those schools where domestic science is not included as a separate study, the pupil should be taught the ill effects of unwholesome food upon his physical health, and such instruction properly presented is especially needed in those homes where the deadly frying-pan, so called, is so much in evidence. In spite of the fact that wholesome food is abundant in the country, it is often prepared in

such manner as to render it both unpalatable and indigestible.

The rural school-house, especially the older ones, are not properly ventilated, the windows are badly located, and the light poorly distributed. The children in such schools will be drowsy and dull, and complain of the cold, not from lack of heat, but because of insufficient oxygen. The privies on the rural school grounds are almost always insanitary. Nor need this statement be confined to the country schools, strictly so called. I have known a school house in a restricted residence district, where an old, small and badly constructed privy vault was used to receive the drainage from the toilets of the school house where about three hundred and fifty pupils attended, and I have known the authorities in such school to serve a warm lunch to the children in the basement of the school house within fifty feet of the cess-pool. In the same school, garbage was disposed of in a most insanitary manner.

What has been said of the water supply in the home, applies in general terms, but with added force to the average rural school.

The sanitary privy is to the country home what the sewer system is to the city. No city should boast of its sanitary condition which does not have a perfect system for taking care of all sewage, and no country home can claim to be sanitary without a sanitary privy. Typhoid fever and most diseases due to intestinal parasites, are caused by taking into the stomach some discharge from the bowels of patients suffering from such disease, and the latest investigations seem to prove that pellagra and hook worm are caused by soil pollution. Much of our constipation, especially in women, with its long train of symptoms and sequelae, is caused by neglecting the call of nature rather than go to an offensive privy.

A sanitary privy must not only be a receptacle for bowel discharges. It must be as clean and attractive as possible, must be fly-proof, and so constructed that all danger is obviated of the contents ever polluting the soil or reaching the human body until rendered harmless. It should be provided with a wash-stand and basin where the hands can be cleansed before leaving the privy after a bowel movement. That this is a necessary precaution is proved by the fact that typhoid carriers who have worked as cooks, have been the greatest spreaders of typhoid infection in their class.

The sanitary privy as perfected by J. N. McCormack, and now the official privy of the State Board of Health of Kentucky, is, I think, a perfect solution of this question. It is a simple, practical, septic tank for the bacterial treatment of bowel discharges. It is built of concrete with three compartments,

and the first compartment is so arranged as to give the dissolving and liquifying action of the anaerobic species of bacteria, and the oxidizing action of the aerobic species in the other two. Such a privy can be constructed at little expense, is neat, requires no cleaning, and with proper attention will be odorless.

The work in rural hygiene reminds us of two proverbs which are naturally associated in this connection: Namely, that "An ounce of prevention is worth a pound of cure," and that "Cleanliness is next to Godliness." Too often we find, however, that the rural dweller seems to think that cleanliness is next to impossible.

If any additional consideration were needed to show the importance of practical hygienic work, it may be found in the fact that corporations working large numbers of men in camps are realizing the importance of hygiene, and that many mining camps in this State have proved, by practical results, that a sanitary camp pays. It will also pay in the State, county, town, or rural community.

In conclusion, I take pleasure in quoting from the address of J. N. Hurty, Secretary of the State Board of Health of Indiana, delivered at the meeting of the Kentucky State Health Officers in December, 1913. Dr. Hurty said, "In offering hygiene to rural life, we believe our services are needed, and we further believe it is our duty to give them. But, let us not forget that unless our work is well founded, it will not stand. Health and strength can only be developed in normal tissues. Even supreme effort will not entirely prevent the invasion of infections. Insist, therefore, that it is not sufficient simply to teach the laws well being, and how through obedience to them, health and a virile long life may be attained, but we must force hygienic practices upon the people the same as is found necessary in regard to education when it was made compulsory. Yet, even compulsory hygiene is not enough, for a house builded upon the sand will not stand. And, so I return to the first proposition, which is—all must be as well born as possible. Through breeding, let us eliminate the constitutionally weak and those predisposed to specific diseases."

DISCUSSION.

Arthur T. McCormack. Bowling Green: Important and practical as has been every paper presented on this excellent program, I do not believe any other one—I think I can say that without invidious distinction—is quite so important to the physicians and people of Kentucky as the one just read. I am sure, it is with peculiar pride that the physicians of the Campbell-Kenton County Society have listened to Dr. Shaw's excellent presentation of this important and

practical subject, because they understand and we understand out in the State that the construction of such a paper would have been impossible, presented by a local health officer, before the organization of this society. To the doctors in the counties which have not yet sufficiently active organizations to have created such public sentiment as the work that is being done by Dr. Shaw, this paper should be instructive and the story and achievements of the Campbell-Kenton Medical Society should be a guide and an inspiration to all of us. By the careful scientific work they have done in their meeting place, by spreading the knowledge which they have gained to the laity of this county, has come the possibility of this work. We in Kentucky have a serious problem confronting us. We have just begun to take an invoice of the health conditions in the State lasting some three years. It has been done with great care. It has been an expensive invoice. It is a troublesome matter to everybody to make a record of every birth and death in our health invoice. It takes a large vault already to hold the certificates of births and deaths registered. We now know what the people die of. We are confronted with a practical problem. The death rate from consumption in Kentucky is thirteen per cent. larger than any other State in which the vital statistics have been registered. Is it not worth while for us to see if there is not a peculiar condition among the people of Kentucky that makes them more liable or susceptible to tuberculosis than the people of Indiana or Ohio, and also to teach our people who have consumption how not to spread it. We have gotten the idea that when a man comes to us and we find something the matter with his lungs, we are harsh and cruel if we tell him he has tuberculosis. I want to say to you, unless you tell him he has tuberculosis, if he has, and is actively spreading it, if he is, frequently you are participating in a crime, and murder is frequently that crime. No matter who is expectorating the germs of tuberculosis, to go about and expectorate them freely is a crime, and no tuberculosis patient will do it if it is explained to him frankly and simply by the family physician.

Be sure that the diagnosis is correct; do your work thoroughly and accurately, and give the patient the benefit of the doubt. If you are not certain of the diagnosis, call in some one who can be certain. Give the patient the benefit of that evidence early, so that he can be relieved if possible.

In Kentucky typhoid fever each year costs more dollars in money than the whole State government costs. Our State government costs too little. We are spending \$7,000,000.00 on State government; we ought to be spending \$14,000,000.00, but we cannot afford it because of the tremendous burden of sickness in this State. This burden can and should be lifted.

We frequently hear it said that the doctor does not do so much after all for the people without being paid for it, but there is not a doctor present who does not know that more than one-third of the people on the average for whom he practices in this county and every other county, never paid one nickel of doctor's bills in their lives and never will, and yet they receive the same attention as others. As a matter of fact, for the support of the medical profession, these paupers should be lifted from the thralldom of disease and put on a State basis and have their diseases treated with civic respect. We have now filthy diseases that bring the State a bad reputation, and the thing for us to do is to have a good cleaning up.

I want to say to the doctors present that it is comparatively rare to see the physicians who need the uplift of such a meeting most occupying the front benches during a meeting of this sort. I want you to say to the doctors back home that every school child in Kentucky, beginning this year, will have in its hands a text book on health, and the preface of that was prepared by the State Board of Health. It says among other things: It is very important when you are sick to have a good doctor. There is no easy way to tell a good doctor from a bad one. They look more or less alike, but if you go to a doctor's home and find the kitchen and dining-room screened and flies kept out, and his office clean, so that a clean person can go in without soiling his clothes, and he himself is a clean man, you will find, as a rule, he is a good doctor; otherwise he cannot be a good doctor. In addition to that, we instruct the children to ask him whether he attended the last meeting of his county medical society, and if he attends regularly. If any doctor says he is too busy to go to his county medical society and does not attend, we teach the children that he is a bad doctor; that, as a rule, he is an incompetent practitioner because he is not keeping up with the progress of medicine and surgery. I want the members of the Association to know that this text book is going into the hands of every child in Kentucky. In the future the children will take an account of the doctors who are supporting active county societies.

Finally, it is with a great deal of pride that I have listened to this paper of Dr. Shaw and note the future that is coming to Kentucky when we shall have a clean-up in this State from these controllable diseases and have a healthy population, a campaign that can only be considered as having begun when we have a consecrated, competent whole-time health officer, like Dr. Shaw, in every county in our beloved Commonwealth.

Z. A. Thompson, Pikeville: Living as I do in the rural district, it is a fact, I am sorry to say, that a great many people throughout the country district are opposed to any sanitary conditions. The only way I know to improve this state of af-

fairs is to have a whole-time health officer who can devote his whole time to the health of the county and not be expected to practice medicine. It is the only way out of this dilemma.

W. W. Anderson, Newport: The gentleman who has just spoken makes a plea for a whole-time health officer. We had a bill introduced in the Legislature for this purpose, and which should have passed and would have passed if it had been presented on its merits alone, untrammelled by any other issue. At the time I was requested to go to Frankfort and appear before the committee. The committee in the Senate having this bill in charge was hostile for political reasons,—not that there was any politics in this bill whatever. The bill was opposed by certain people who figured that this bill could be used as a club to prevent the passage of other bills they wished to defeat. When we appeared before the committee and argued for a full-time county health officer, the bulk of them were hostile to it. They could not give a sensible reason for their objection and hence made a favorable report, and yet the professional politicians came in one after another and succeeded in side-tracking this important bill. I believe the doctors of the State should do as our doctors here in Campbell-Kenton County have done. You know what you want in the way of health legislation. Put the matter before your representatives in advance of the session, and if for any reason they should overlook your bill, and not consider it, again put the matter up to them. In this way I believe you will accomplish something. It can be done. All you need is to present the true worth and merits of the case and say to them there is no politics in this; that there is nothing in the bill that favors the Republican, the Democrat or Progressive, but it is simply righteous, progressive and is in accord with the moral sense and welfare of the people. If you do that, you cannot fail. We ought to have a whole-time county health officer who does not practice medicine. That will strip him of very many embarrassments in connection with the work. We know how local and county health officers, who are obliged to practice medicine, are hampered by little jealousies on the part of other practitioners who are not well versed in what health officers are doing. We can evade that if we have a whole time health officer.

Dudley S. Reynolds, Louisville: This is a great question. It has many sides. It is difficult to determine what is just the best way to go about the accomplishment of reforms in these county health matters. If the county society of every county would adopt some uniform plan of procedure, and it may originate here, and the foundation may be found in this essay by Dr. Shaw, it would be a good thing. But we have to decide upon two questions. First, we want drainage of the wet lands of Kentucky, the unused and unprofitable lands of Kentucky, that they may be easily re-

claimed and add largely to the health and revenues of the State, as well as the prosperity of the owners. We want whole-time health officers to see to the administration of our sanitary laws. The public must be made to do some thinking in this matter, by those who have studied these problems, and then we may come nearest to the solution of them. Bills presented in the Legislature fall into the hands of committees who introduce what lawyers call *jokers* which make the measure inoperative. We have had a great deal of that kind of legislation, and our statute books are a disgrace to an intelligent people. Let us take the last revision of the statutes of Kentucky. Take Carroll's revised statutes for example. There is not one of them that has the great merit claimed, you will find always certain contradictory passages.—what lawyers call *jokers*. It is absolutely impossible to establish any kind of contention, in a court of law, with respect to the question of drainage, in this State, and drainage is one of the fundamental principles of all of our sanitary progress. If we get together and frame the bills we want the Legislature to enact, we will have to be on the alert all the time, constantly on the alert to keep them from inserting these contradictory clauses, which invalidate the rest of the bill, those *jokers* as they are called. It is one of the provoking conditions of all our laws. None of them are free from contradictions, or ambiguities.

I wish you gentlemen of the medical profession would just borrow from some neighboring lawyer for your own amusement and instruction a copy of the revised statutes of Kentucky and see what the law says on any subject; I do not care what it is. Our laws are gotten up to promote discussion, dissension, and litigation, and wrangling amongst the people. That is what they are gotten up for. (Applause.)

Handy Mufflers for the Men in the Trenches.

—Dr. Michel, the inventor of the elips used in closing wounds, now presents a muffler for the soldiers in the field which can be used for a hood, a vest, a body band, muff or a jacket as desired. The muffler is crocheted, about 1.2 meters long by 40 cm. wide (about 48 by 16 inches). A slit 20 cm. long (about 8 inches) is left lengthwise in the center, and buttons are sewed on each end and along half of the edge of each side—about two dozen buttons in all. Crocheted mufflers are much better than knitted or cloth ones he states. The crochet should be loose with a simple single double stitch. The large meshes permit the buttons to be buttoned anywhere in the muffler, thus fitting it to any surface. Several mufflers buttoned together make a warm blanket.

DRINK PLENTY OF WATER.*

By J. J. MOREN, Louisville.

In the discussion of constipation at a recent meeting of the Medico-Chirurgical Society, "drink plenty of water" was the most favorite remedy. Some advocated using as much as five glasses before breakfast; others favored a less quantity. One doctor regretted that he had to leave the meeting without a clear understanding as to how much water to advise or when or how to give it. This prompted my subject and you must be patient with my compilation and review of an old remedy, as oftentimes such study refreshes our mind as to their value and helps us to explain and understand the new.

It is only necessary to remind you of the importance of water, one of the most essential articles to maintain health.

Thompson gives the following:

"1. It enters into the chemical composition of the tissues.

"2. It forms the chief ingredients of all the fluids of the body and maintains their proper degree of dilution.

"3. By moistening various surfaces of the body, such as the mucous and serous membranes, it prevents friction.

"4. It furnishes in the blood and lymph a fluid medium by which food may be taken to remote parts of the body and the waste matter removed, thus promoting rapid tissue changes.

"5. It serves as a distributor of body heat.

"It regulates the body temperature by the physical processes of absorption and evaporation."

Continuous deficient water drinking has been accused of causing many and various abnormal conditions which may or may not result in disease.

Conversely, excessive water drinking has also been accused of killing people. Each of these has evidence to support the acquisition, and I hope to show when and where the fault occurs.

The first question that arises is how much water is required by the average man. It is estimated that 70 per cent of the body weight is water and to keep good health or normal function, this percentage must be maintained. Elimination is continuous from the kidney (50 per cent.), bowels (2 per cent.), lungs (20 per cent.), and skin (28 per cent.), and this must be replaced by taking water alone or with food stuff. Thompson estimates the daily need as 80 to 90 ounces. About 20 ounces is derived from solid food and the remaining 60 to 70 ounces, or 7 to 9 glasses must be taken in liquids.

This is for the average man under the average circumstances of a daily American life. However, those exposed by occupation to heat, hard work, etc., need and consume more.

You will also appreciate the fact that many indoor people, living in a super-heated dry atmosphere, drink far less than three pints of fluid each day.

Such an individual is the one whom we accuse of suffering from deficient water. Last month I saw a young woman, anaemic, nervous, fainty feeling, fears, insomnia, inactive bowels, anorexia, etc., who did not take as much as a pint of fluid each day. There was no recognized pathology. Can we say that deficient food and liquid was the cause or effect?

Another instance: An active business man with very inactive bowels, thin and high strung, nervous, urine concentrated, rarely drank a glass of water and did not partake freely of liquid food. Is the deficient water sufficient to explain this condition?

Case after case has occurred in your practice with such a history. Different pictures could be recited by you and me and each will only convince us that water would help these people, but may not cure them. If reasonably used, it could not possibly injure them.

How often we are confronted with the reverse. Only recently a young man in full vigor and strength, complained of a tingling and numbness in his hands—especially after he has been asleep. Blood pressure under 120, pulse 60 to 65 (natural); irregular and inactive bowel.

Another picture—a lawyer drank a good sized pitcher of water at each meal and ate in proportion. He died in coma. His retina was punctuated with small haemorrhages.

Are these people victims of excessive drinking?

Will you not agree with me that the healthiest people are liberal though not excessive water drinkers?

These will suffice to show that there is a right and wrong way to use water.

There is no need of my attempting to give the evils of excessive or deficient water, each of us have our opinion,—some more enthusiastic than the other.

When is the best time to drink water?

The best answer to this is—when you are thirsty. However, some say drink before meals; some say not to drink at meal time; others, drink between meals.

As to drinking at meal time, it has been my practice to advise not less than two glasses of liquid with the meal. I believe that digestive liquification of the food stuff will be favored by such a quantity and not detrimental in the least. One great disadvantage of drinking with the meal is that the patient will wash his

*Read before the Muldraugh Hill Medical Society.

food down instead of masticating it and allowing it to become thoroughly saturated with saliva. I believe that four or five ordinary glasses of water at a meal would be bad practice; not so much upon the digestive process, itself, but the weight of the water may tire and swag the stomach, particularly if there is any tendency towards atony. Many have at times difficulty with liquids getting out of stomach. This is noted when the stomach sounds like a water bottle on shaking.

It is interesting to note the experiments of Hawk, who concluded that free drinking at meals, really favored the general health of the individuals. There was a decrease of the putrefactive process, a decrease in the amount of indican and bacteria in the feces. He certainly noted no ill effects.

In ordinary cases, the water may pass directly into the intestines as Cannon has shown. He makes the statement that water drank at the latter part of the meal remains about the lesser curvature and passes directly into the duodenum, so this may be the result of drinking immediately after a meal. This may also explain the frequency of vomiting of solid food in nervous people, especially hysteria. The hysterical patient frequently shows hyposecretion of acid; consequently, the pylorus may be less active and permit the free passage of liquids.

The great mistake about drinking water before meal, is a question whether the water is emptied from the stomach before the meal begins.

"Water begins to enter the intestine almost as soon as it enters the stomach: it may pass out in single gushes or continuously. According to Moritz, who watched the process through a duodenal fistula, 500 c.c. of water may go from the stomach into the intestine in thirty minutes. Similar results have also been reported by other observers who have studied the exit of water. Physiological salt solution likewise may go out rapidly."

Drinking an ordinary glass of water before a meal has no influence on the gastric secretion, whether it be hot or cold; however, Pavlov has demonstrated that it did have an influence on the pancreatic secretion, and possibly from this effect depends its stimulating influence upon the peristalsis. To effect the secretions of the stomach, it requires 500 cubic centimeters (2 glasses) and Pavlov concluded, after demonstrating secretion of the stomach from such a quantity, that it was not the water which excited secretion but the bulk and the duration in the stomach. He says:

"When only 100 or 150 c.c. of water are injected, very often not the least trace of secretion occurs. It is only a prolonged and widely-spread contact of the water with the gas-

tric mucous membrane which gives a constant and positive result. (secretion). The rapid exit of water from the stomach would preclude the conditions which make it even a feeble stimulant of gastric secretion. And the failure of water to excite any noteworthy amount of gastric juice favors a rapid exit, so far as the duodenal reflex is concerned, for the acid stimulus closing the pylorus is thereby absent."

If the motor power of the stomach is normal, the practice of drinking away from meals is to be advised over drinking at meals. Personally, I believe that a glass of water before breakfast; a glass or more in between breakfast and noon; noon and dinner, and at bed time: is good practice. I believe that it is necessary to have at least two glasses of liquid with the meal which would total up approximately 80 ounces of water; a quite sufficient liquid under ordinary circumstances.

Lots of people do not drink between meals; some from the lack of desire; others for the avoidance of elimination, and others just do not think about it, and do all of their drinking at meal time; other people do not drink at meals, thinking that water drank an hour or so after a meal is far better. In this way, they deprive themselves of liquid and have practically no influence on digestion by delaying the liquid.

There is no positive evidence to support any special time as the best for drinking.

The individual characteristic, habits and physical condition are the only rules that are not opposed by results or different investigations. We all know people in good health and in poor health who take liquids at different times and cannot handle them at other times. Our only conclusion would be that it is liquid we need, and we want it when we want it, and should take it when needed.

IS THERE ANY VIRTUE IN THE TEMPERATURE OF WATER.

We are frequently told to drink cold water or water as hot as we can drink it. This question cannot be answered with certainty. Ortner says, "If there is irritation or a tendency to diarrhoea, use warm water; if you desire to stimulate the digestive tract, use cold or cool water." Others claim that low temperatures have a quieting effect on the movement of the stomach while high temperatures cause an increased gastric peristalsis.

Cannon experimented with hot and cold food and could see no apparent difference in time required for the stomach to empty.

When we administer water with the hope of a therapeutic effect from its temperature, we must bear in mind that the water has to pass through a tube and lands in a reservoir profusely supplied with blood which is constantly

changing and remains at a temperature of about 99 per cent; consequently, the temperature of the water will change very quickly towards that of the normal bodily temperature. Two glasses of ice cold water has been introduced into the stomach and withdrawn after five minutes and found to register 95 degrees. The administration of water at the temperature of melting ice, or cracked ice, is refreshing and stimulating, but whether it has any marked influence other than the stimulation of the gastric mucosa, is speculative and cannot be confirmed nor denied as having any marked or permanent influence on the blood supply or the peristalsis. The same holds true of hot water; however, very warm water cannot be gulped down; consequently, is taken in sips and in this way, it is cooled down to the bodily temperature quickly.

It is a question whether either stimulates secretion more than medium temperature; however, it stands to reason that if the stomach contains mucus, the liquid, itself, will have a tendency to clear the stomach of the accumulative mucus. In the treatment of constipation, both extremes of temperature have been recommended but it seems to me that it is the bulk of the liquid or the liquid, itself, that has the favorable influence and not the temperature. With some warm water is more acceptable than cold; with others, the reverse. The temperature seems to have no regular or different effect upon peristalsis.

EXCESSIVE WATER DRINKING.

An average healthy man can and does handle at least a gallon of liquid per day without harm. But should this keep up until his pump or heart begins to weaken, then the burden will be too much.

This is noted in beer drinkers.

This burden is also noted when the stomach shows atony or tendency to dilatation. With so much intake, elimination must occur and should the kidneys fail to eliminate an additional burden is added. Hence, we may say that the excessive water drinking is a question of whether the water can get out of the stomach, be pumped by the heart or the excess can be eliminated.

It is a question whether an excess of water will raise blood pressure. Some say it will, and it stands to reason that it should, but we must remember that the blood stream has the power of maintaining under most instances a certain volume and density. Consequently the rise of blood pressure may last for only a sufficient time to allow the circulation to accommodate the fluid.

What constitutes excessive fluid is a variable question. A beer drinker would not consider 10 or 12 glasses of beer and other liquids with food an excess. An individual, drinking a

half gallon of water at a meal, says it aids digestion, but you know such men sooner or later come to grief. However, it will be generally conceded that free water drinkers, two to four quarts per day, are the most healthy individuals.

Whether they are less liable to gall stones, kidney and bladder stones, rheumatism, etc., is speculative and would depend upon the quality of water, infections and mode of living.

There is no doubt that obesity and heavy liquid drinking are related; if not from the fact that obese people drink freely but from the fact that individuals who use liquids at meals eat more than those who do not.

A host of things could be laid at the door of excessive drinking of liquids, but a good and careful examination explains them from other cause. It is for us to decide whether the liquid is being handled to an advantage or to too great a task under the circumstances.

DRINK RESTRICTIONS.

The practice of advising "plenty of water" in every case is not good practice. Why burden a crippled heart or arteries with an excess of water? Restricting the amount to a minimum of 20 to 40 ounces is advised for a time sufficient to allow regaining of strength or compensation, then increase the intake.

Crittenden noted that as he diminished the amount of nitrogenous food, there was less craving for water. Such an observation should be considered, and might prove useful in cases requiring restoration of fluids.

In the treatment of obesity, limitation of fluids to one or two glasses per day has been frequently advocated. A more popular procedure was to avoid liquids at meals with a privilege to eat as one liked.

To many the latter procedure would mean a small meal. Both of these reduction cures have resulted in success in many instances, but require patience and courage to continue; consequently, as is the rule with so many cures, the patient loses interest and falls back to his old habits.

It has been claimed that reduction of water causes a greater destruction of fat and nitrogenous material but investigations do not agree. Nevertheless, in starvation of both food and water, there is for a time increased nitrogen elimination.

Sohli called attention to the difficult and diminished water elimination; especially, in acute nephritis with fever. This suggestion should be considered when we are confronted by such a case.

Van Norden gives the following as resulting from restricting the intake of liquids:

"1. The stomach is relieved of much work,

and the pressure exercised upon its walls is reduced.

"2. The total labor performed by the circulatory apparatus is decreased, and the heart is spared.

"3. The fluids of the body become more concentrated.

"4. The body-weight is decreased as a result of the dehydration of the blood and tissues.

"5. The appetite is reduced.

"6. The destruction of albumin is increased (only, however, if the restriction of water is carried very far)."

Van Norden also called attention to restricting the amount of water in chlorosis in the early treatment, believing that you obtain better results from tonic administered to correct the anaemia. This suggestion will not seem so strange when you recall how often these people look fat, but show a low haemoglobin.

The restriction of liquids should not be advocated for too long a period. In those cases requiring restriction, certain days should be set aside as "water days" allowing them to imbibe more liberally. This will avoid many unpleasant cravings.

MINERAL WATERS.

Pavlov showed that the diffusible alkalies had practically no influence on secretion other than a slight inhibition; consequently, the alkalies of an ordinary mineral water has practically no effect, unless it be in gastric hypersecretion, in most cases it is the quantity of water imbibed that has the good effect upon the patient. Ordinary mineral waters used at home have no more effect than the water of their own neighborhood. It is a practice that has been abused.

The natural carbonated waters would hardly be classed under this statement. As Pavlov shows, the carbon dioxide gas did encourage intestinal secretion more than water or the alkalies; consequently the natural carbonated waters containing slight alkali, might have a more beneficial effect than plain.

The diffusible alkalies may cause a greater elimination of water and thereby remove from the system a lot of obnoxious materials that would not be gotten rid of otherwise but such a practice cannot be kept up indefinitely, and it is for the physician to overcome such conditions by rational therapy rather than sympathetic remedies.

The purgative waters which contain salts that are less diffusible and stimulate secretion in the intestines, are good for their immediate effect but long continued use is detrimental, as you are well aware.

The results obtained at mineral springs depend upon change, rest, recreation, diet, etc.,

as much as upon the therapeutic properties of the water.

WATER IN CONSTIPATION.

This question brings up the point that prompted my title. Many factors are to be considered in answering this question. The type of cases which will be referred to are those who have no known pathology. However, constipation dependent upon piles, adhesions, obstruction, etc., could not be harmed by water and might be temporarily favored by its judicious administration.

In the very beginning, we must remember that the stomach and intestines secrete quite a good deal of fluid, varying according to the amount and the character of food stuff that we eat; consequently, the effort of the food stuff, itself, will have much to do in the action of the intestines both as a secretion and motion. It has been shown by animal experimentation that a dog eating 500 grams of meat will pass something like 10 grams of feces. Take the same dog and feed him vegetable food stuff, and the amount of feces will decidedly increase. This, as you know, is dependent upon the cellulose contained in the vegetable products.

If an individual is eating a highly concentrated food with practically little or no refuse, this individual will necessarily be affected by an inactive bowel. Water may help eliminate through the various organs of elimination, but have comparatively no influence on the bowel but may cause a better bowel movement than in an individual who drank a diminished quantity of water. The fault with such an individual is that the diet is lacking in refuse, which is a stimulant to peristalsis.

The present fad of eating brand is a good one and shows how we are reverting to the habits of our forefathers and eating good wholesome food. If the proctologist will keep quiet, possibly we might reinvent the corn cob.

The average individual should have from 60 to 70 ounces of liquid. His secretion would be far better with this amount of water. His system would be saturated with the liquid and there would be less demand for absorption from the colon which is nature's method of preventing the loss of water. It is well to remind you that absorption of food material takes place in the small intestines and the secretion of the intestines will about balance the absorption of liquids. The greatest absorption of liquids occurs in the colon; consequently if the system is in need of liquids, rapid absorption may take place from the colon and favor constipation; and this point is where the value of water drinking occurs in constipation.

The principle of agar—agar, Russian oil, is to cause a moist or soft fecal mass.

As to the amount required in an individual case, is a question of the individual peculiarities, occupation, diet, etc. Some may need three or four pints; some may need more or less. We must take into consideration the character of the diet, occupation and habits of the individual to decide this question.

The condition of the patient must always be considered. My experience has led me to believe that "tire," fatigue and lack of sufficient sleep have an important bearing upon constipation. What is the need of filling these people full of water?

I also believe that we should consider the circulation. How frequently we are consulted by men in middle life, strenuous workers, big eaters, and irregular livers, complaining of constipation, indigestion, etc. Their blood pressure usually is a little high, but no marked evidence of vascular disease. Do they need four or five glasses of water before, with or after breakfast?

These men need to get away from work, they need a rest and saline purges. A trip to the springs does these people good, but should be carefully watched on return home.

The ready acceptance and practice of foolish procedures in such cases often result in harm.

A very important factor in constipation is the formation, absorption and elimination of gases. Cannon showed that gaseous distention inhibited peristalsis. The point which I wish to call your attention to is the importance of the circulation.

Not especially causing flatulency but disturbing digestion in the entire tract—you are familiar with the frequency of flatulency in vascular diseases.

Take the indoor person, cramped at a desk and give him the freedom, exercise, hill climbing, etc., of the country, he may drink more liquid, he does eat more coarse food, but is it not more reasonable to assume that change, and exercise have caused a more perfect circulation which in turn prompts a better function of all the organs. Under these circumstances is there not a better absorption and elimination of gases? Flatulency frequently arises from error in diet; also from swallowing air.

Heaving drinking with meals has been attributed as a cause; especially, with a meal composed of sweets.

To do the best for these patients, we should determine as far as possible the cause of the flatulency.

If this be true, why not apply the same principle to the ptosis cases? Their cold extremities, palpitation, etc., are indication for a better circulation. Such cases need more than water; they need strength.

Further consideration of the physical condition is advisable.

If you could determine whether there is a deficient acid secretion, the larger quantity, say two to four glasses, on arising by stimulating gastric secretion would encourage a better digestion through the entire tract and thereby a better peristalsis.

If there is no need of encouraging secretion, one glass before breakfast will act just as well, provided he take the required quantity of liquid during the day. If there be hyperacidity with good motility, an addition of alkalies would be preferable. This type of cases often complains of constipation, partly explained by rapid and complete digestion, but more frequently it can be attributed to withholding from vegetables, fruits, etc.

Constipation in simple gastric dilatation water is to be used sparingly, as these cases have a hypersecretion and have trouble in emptying its own secretion.

In those cases of ptosis who have "indigestion of liquids," if you can put them to bed, they fare much better.

If your patient needs rest, see that he gets it. If he needs exercise, as most city people do, get him interested in athletics.

CONCLUSIONS.

In giving advice about the use of water, it is well to consider that it matters but little whether it be hot or cold, with meals or before eating. It is a question of sufficient water for the organs to perform their functions of secretion or elimination.

It matters not whether we hope, by encouraging water drinking, to dissolve calculi, eliminate uric acid, or promote expectoration in pneumonia, etc., it is a question of sufficient water to make excretion possible.

Water will not eradicate the evils of wrong living, it will carry away refuse but to remove the trouble, the particular error must be found.

It matters not whether we allow 1-2 to 1 1-2 gallons per day. It is a question of what this patient needs and is able to handle such a quantity under the circumstances.

Each of you will agree with me that the advice, "drink plenty of water," should be regulated or a specified amount allowed and not permit one to tax his body with an unnecessary burden.

Water and diet will do much in overcoming constipation, but in most cases that report to the doctor will not be relieved by water or diet alone. Other measures are needed, and the success depends upon selection of such measures as are required in the individual case.

THE PRESENT STATUS OF VESICAL TUMORS WITH REFERENCE TO FULGURATION.

By GEORGE H. DAY, Louisville.

Rather than delve deeply into the etiology of vesical tumors, we will accept the modern classification in that they consist of about three per cent of diseases of the urinary organs. Also, that they are more frequently found in men, and that they are comparatively rare in children, the age most frequently seen from forty to sixty years.

For the sake of description they are classified:

No. 1.—EPITHELIAL GROWTHS:

- (1) Benign.
 - a. Papilloma. Villous Tumor.
 - b. Adenoma.
 - c. Cholesteatoma.
- (2) Malignant.
 - a. Papillomatous.
 - Papilloma.
 - Malignant Villous Growth.
 - Nodular Growths.
 - b. Infiltrating.
 - Epithelioma.
 - Adeno-carcinoma.
 - Alveolar carcinoma.

No. 2.—CONNECTIVE TISSUE NEW GROWTHS:

- (1) Simple.
 - a. Fibroma.
 - b. Myoma.
 - c. Angioma.
- (2) Malignant.

Sarcoma	{	Spindle-celled.
		Round-celled.
		Melanotic.
		Rhabdo-Myoma.
		Chondro-sarcoma.

No. 3.—DERMOID CYSTS.

It is conceded that 80 per cent. of all vesical tumors are malignant. Watson, in a study of 653, found 410 malignant and 243 to be benign. In a group of 117 cases Young found 83 per cent. malignant, 17 per cent benign. Von Frisch in a series of 300 operative cases found 66 2-3 per cent. only malignant and 33 1-3 per cent. benign. Of 88 cases Albarran found 75 per cent malignant, and Maudlebaum and Zuckerkindl found 65 per cent. malignant. In my series I have found 73 per cent of all vesical tumors to be malignant. These statistics are rather startling in that most benign tumors of the bladder are accepted by the average surgeon as of little consequence and is only recognized and treated when the symptoms are of such character that the patient demands surgical interference. Until very recently, previous to the introduction of the cystoscope, we recog-

nized clinically two distinct types of bladder growths, the semi-benign papilloma and the unquestioned cancer. True enough the many subdivisions of these classes existed, but they were known only to the pathologists, and were only seen in more advanced stages of the disease. Many times no doubt you have sent sections of tumors to the pathologists for diagnosis in turn to be disappointed in classification, owing to the difficulty in obtaining a good section,—also, a great similarity microscopically in many of the benign and malignant tumors. Conceding that all malignant tumors are malignant when discovered by the cystoscopist, also that all papillomas ultimately are malignant, treatment naturally resolves itself into radical removal. It is my purpose to-night to touch more upon the papilloma, the most common form of vesical tumor, rather than the exceptional ones of the connective tissue growths.

A vast majority of bladder tumors are under this classification. These are the cases that present themselves with an occasional painless haematuria, no other symptoms, possibly extending over a period of fifteen years. It usually appears suddenly, without cause, may continue for one or two micturitions, or for a day or two, then suddenly disappears. Rest has little or no effect, hemorrhage is copious, mixed throughout the urine. Clots are usually observed. The hemorrhage occurs at diminishing intervals, often with increased duration, throughout a number of years. At times very little hemorrhage is noticed. I have seen several cases of enormous papilloma where little or no hemorrhage had ever been noticed. Pain in one or the other kidney is frequently present, especially when the papilloma is situated in the neighborhood of one or the other ureter. I have also observed a case where a long pedunculated tumor was situated near the vesical outlet, acting as a valve to the complete evacuation of the bladder contents, thereby setting up an intense tenesmus with complicating cystitis. Cystoscope should be resorted to for all cases of unexplained haematuria, tenesmus, or cystitis from any cause whatsoever. A cystoscopic examination I have found to be of much greater value than a microscopical or any other laboratory procedure in the diagnosis of these conditions. While it is not always possible to differentiate a benign from a malignant tumor, we are able, however, to get first hand information in every particular as regards the pathological condition. Therefore, in all suspected bladder conditions examination by a competent cystoscopist must always be accepted as a matter of routine.

TREATMENT.

Treatment is divided into a non-operative

and operative. The non-operative treatment consists of washing the bladder with solutions of silver nitrate of different strengths, hoping to get the escharotic effect of the silver. Solutions of resorcin have been advised.—MacGowan reports a case of an enormous papilloma which disappeared completely after the use of a 20 per cent. solution. This he gave after operation had been refused. The operative treatment consists of,

Suprapubic excision,

Fulguration,

Suprapubic drainage,

Suprapubic partial excision with destruction of the base by cautery.

Until very recently total excision of the tumor and surrounding bladder mucosa was preferred and is still accepted by many prominent surgeons, notably the English and French schools. In this country however, with the development of the modern operating cystoscope, the use of the high frequency current has practically revolutionized the treatment in these tumors. Young's report of 117 cases, 85 per cent. of which were malignant, shows that excision as usually carried out is utterly inadequate, and all cases recurred promptly both benign and malignant.

Pilcher reports 25 cases of re-section which promptly recurred, later to be removed by fulguration, with no recurrence at the site of the tumor, several developing tumors in other portions of the bladder to be removed later by the current. As an example of this treatment, Mr. B. P., age 52 years, referred by Dr. J. Hunter Peak for cystoscopy.

An enormous papilloma was found, involving almost entirely the left side of the bladder and urethral orifice. His personal history was negative, denies all venereal infections, married, has eight children. Haematuria first noticed twelve years previous, slight bleeding for twenty-four to forty-eight hours, then disappearing. These symptoms were noticed several times a year until quite recently. Hemorrhage now present the past fifteen days. Advised fulguration by the suprapubic route, which was refused. This was admitted most advisable in that the tumor could be destroyed completely at one sitting. He accepted, however, fulguration by cystoscopy, the first being given Sept. 7, 1914, the second Sept. 12th, and the third and last Sept. 16. On Sept. 16th little if any of the tumor remained. Treatment consisted of sparking the tumor and pedicle from one-half to five minutes.

Of the numbers of cases I have personally observed brilliant results have been obtained in all. In the small multiple variety rarely over two treatments are necessary. In the large villous type at times it is necessary to

give as many as four. Recurrences in none have been noted, but the time is rather too early to be noted. They are cystoscoped, however, at regular intervals and if such recurrences are observed prompt treatment will speedily destroy them.

The report of the accompanying specimen from our laboratory (Dorsey) was essentially a bladder growth composed of elongated, branching and interlacing papillary projections, each with a central connective tissue frame work carrying blood vessels, and covered with approximately normal, though occasionally hyperplastic epithelium. Some of the spaces between the interlacing columns were cystic, some completely filled with cells of a polygonal squamous type, but without evidence of keratinization. In such cellular masses the central cells not infrequently showed degenerative changes. There was no evidence of malignant changes. Interspersed between the cells at various places in the growth were ovoid bodies composed of a central round protoplasmic mass, with one or two rounded chromatin masses. These central structures were surrounded by a clear space limited externally by a thin sharply demarcated capsule. These structures are apparently the result of retrogressive metamorphosis of epithelial cells. This tissue is a portion of a simple papilloma.

Of this method of treatment Young says, as in cancer in other portions of the body success depends much on an early diagnosis. One cannot urge too strongly the advisability of cystoscopic examination in all haematuria cases. Some cases of cancer of the bladder show few symptoms. Therefore, one should not wait for blood in the urine before urging cystoscopy. Only three years ago many authorities considered it almost impossible to cure papilloma of the bladder, and in many clinics abroad operations on cancer of the bladder were practically discontinued. The demonstration of the marvelous efficacy of high frequency electrical applications is one of the most brilliant and valuable additions to surgery in recent years and that vesical tumors, far from being a hopeless field, is indeed one of great promise.

Interrelationship of Dry Pleurisy, Pleurisy with Effusion and Empyema.—Acute dry pleurisy with effusion and empyema Floyd claims to be steps in one process. The extent of pleural reaction is controlled by the virulence of the infection and body resistance. When the invading organism is one that excites little hemotaxis, pleurisy with or without an effusion will result, but if chemotactic action is profound and the elaborate toxin not too destructive, empyema results.

TYPHOID FEVER.*

By T. C. NICHOLS, Morgan.

An acute, infectious, febrile affection, due to a special poison; characterized by insidious prodromes, epistaxis, dull headache, followed by stupor and delirium, red tongue, becoming dry, brown and cracked, abdominal tenderness, early diarrhea and tympany, and in some cases a peculiar eruption upon the chest and abdomen; rapid prostration and slow convalescence; a constant lesion of Peyer's patches, the mesenteric glands, and the spleen with enlargement of the latter. The predisposing causes are, early adult life (fifteen to thirty years), late summer and early fall months, and individual susceptibility. The exciting cause is the typhoid bacillus or bacillus of Eberth, which is found in the lesions, blood, stools, urine, and sputum of typhoid patients. The poison gains entrance to the system through the alimentary tract by means of contaminated water, milk, ice, meat, oysters, celery, lettuce, or similar substances. Carelessness in disposing of the excreta is a frequent cause but flies may aid in the dissemination of the poison. The atmosphere is never impregnated with the fever germ. Food, fingers and flies, are the chief means of local propagation.

The onset is insidious, with a feeling of general malaise, vertigo, headache, particularly occipital pain, disordered digestion, disturbed sleep, epistaxis, depression, and muscular weakness, followed by a chill or chilliness, the patient being unable to designate the day on which the symptoms began. In rare instances the disease begins abruptly with a chill, followed by a high fever: this is particularly the case in malarial districts. A certain period of incubation is necessary after the successful implantation of the bacillus before typhoid fever arises. This varies from a few days to two weeks and even longer. The fever is at once the most important and characteristic symptom, and from the temperature alone a diagnosis can be made. During the increment of the disease it exhibits a peculiar, tide-like evening rise and morning fall, while the temperature of each morning and evening is from one to two degrees higher than that of the previous morning and evening. This initial period is rarely met at its very beginning, but should it be, it will be found to last commonly a week.

Second week, the foregoing symptoms are exaggerated; fever is now continuous, with a frequent compressible pulse, tympanites, tender abdomen, gurgling in the right iliac fossa, nocturnal delirium, severe and constant headache, often stupor, a short cough with dis-

tinued bronchial rales on auscultation, irregular muscular contractions, sordes upon the teeth and lips, the tongue losing its coating and becoming more or less dry, the diarrhea continuing. During this stage deafness frequently develops, disturbance of vision is common. The spleen is increased in size.

Third week fever changes from continuous to remittent: the evening exacerbations continue as high as the preceding week, the morning fall growing more decided each day, but all the other symptoms remain about the same until near the end of the week. In a fair proportion of cases all the symptoms grow worse toward the end of the second or during the third week. The prostration is extreme, the stupor so marked that it is hardly possible to arouse the patient, the tongue is dry, hard, cracked, and covered with a brown crust; sordes collect on the gums and teeth; the lips are cracked; the pulse is rapid and feeble; the respirations shallow and quickened and there may be retention of urine, which may contain albumin. The stools are often voided involuntarily, and bed sores develop, this condition terminating in death or passing thus into the fourth week.

The fourth week the fever decidedly remits, and is almost normal in the morning; the pulse becomes less frequent and more full, tongue gradually becoming clean; the abdomen lessens in size, the diarrhea ceases, the patient passing into a slow convalescence, greatly emaciated, which convalescence may continue for several weeks.

Diarrhea is the principal intestinal symptom; if absent the lesions may be slight. The stools are at first dark but early in the second week they become fluid, offensive, ochre-yellow in color, resembling pea soup, and may be streaked with blood. They number from three to fifteen during the twenty-four hours. Constipation occurs more frequently than is supposed. Hemorrhage from the bowels, also a consequence of intestinal ulceration, is a serious symptom, but by no means always fatal. Perforation makes the case almost hopeless. It is attended by sudden localized pain and tenderness, tympanites, abrupt fall in the temperature and symptoms of peritonitis. Peritonitis without perforation adds to the gravity, but is not necessarily fatal.

Relapses are not uncommon.

DIAGNOSIS.

The Widal reaction. Widal and others have shown that serum from the blood of one ill with typhoid fever, if mixed with a recent culture, will cause the typhoid bacilli to lose their motility and gather in groups.

A positive prognosis cannot be made. When death occurs it is usually during or

*Read before the Pendleton County Medical Society.

about the third-week, the result of exhaustion, cardiac failure, or some complication.

TREATMENT.

When we remember that the Ebearth bacillus is excreted by a typhoid case for weeks after recovery, and that they are often found in the urine for three months or more, we will necessarily conclude that the disease is a self-limited infection and not a mere gastro-enteric specific inflammation readily cut short by the early use of antiseptics. The treatment of no other disease has been so fully the football of empiricism, and been so buffeted back and forth, as has that of typhoid fever. First of all, it must never be forgotten by the physician that its chief characteristic, the gastro-enteric symptoms, are divided into four stages: hyperplasia, necrosis, ulceration and healing; the treatment must be largely symptomatic.

The patient should be placed immediately in bed in a quiet well-ventilated room, having an averaged temperature of 65 degrees F. Intelligent nursing is indispensable. The most scrupulous cleanliness of the patient, the bedding, and the various sick-room requisites. The bedpan should be employed through the entire course of the disease and the excreta may be rendered innocuous by being passed into twice their (expected) volume of chlorinate lime 1 per cent., or carbolic acid, 5 per cent. solution, and allowing the mixture to remain in a closed vessel for two or three hours before being finally disposed of through the sewer or buried. Bed-linen or other clothing that may have become contaminated should be disinfected by boiling. The diet should be liquid and should be given in small quantities at intervals of two or three hours. Diluted milk, broths, soups, white of eggs, coffee, tea, buttermilk, albumen water and similar foods are permissible but milk is undoubtedly the best. To allay the thirst, cold water may be given in small quantities at a time; the patient requires much water. Washing the tongue, lips, and mouth are also effective in this respect. Prostration is avoided to a great extent by regular feeding every two or three hours, but should the heart begin to weaken and the pulse become soft, whiskey or brandy, in half ounce doses, every three hours, with milk, so as to aid in the digestive process. Just now there is a tendency to grant a more liberal diet than was formerly advised. The inclusion of solid foods in the dietary should not be considered until the temperature has remained normal for at least one week. The reduction of temperature is perhaps the most important indication in the management of this disease. This is best accomplished by hydrotherapy. Cold or tepid sponging with

water or alcohol and water, is often of value. To be effective the surface should be left very wet. The bed should be protected by a rubber cloth. The surface should be rubbed briskly and must be continued during the bath. The tub baths, with frictions, whenever the temperature reaches 102 degrees F. As often as the temperature taken every three hours, is over 102 degrees F., the patient receives a bath lasting fifteen or twenty minutes. After the bath the wet linen is quickly removed and the patient placed in bed wrapped in a dry sheet, and covered with a blanket if there is any tendency to cyanosis or heart failure, give whiskey or brandy, or hypodermic injection of strychnin.

Diarrhoea should not be checked unless it exceeds three or four stools in twenty-four hours when the following may be used, bismuth subnitrate, and opii, or lead and opii. At the onset of a suspected case of typhoid fever excellent results follow the use of calomel and bicarbonates of sodii, in half grain doses every hour until six or eight grains are taken. Constipation in the course of the disease is best relieved by enemas or by calomel in divided doses. Tympanites, may be relieved by the application of cold compresses, and icebag, or a turpentine stupe to the abdomen or turpentine by the mouth. The quantity of food should be lessened in many cases as the distention is often due to fermentation of undigested food.

Headache may be relieved by the application of cold to the head and mustard to the neck and by foot-baths, morphin and atropin hypodermically may be required. Delirium is to a large extent prevented by combating the general exhaustion. Intestinal hemorrhage indicates absolute rest and suspension of cold bathing. The foot of the bed should be slightly elevated and an ice-bag placed over the right iliac region. Morphin, grain 1-4, should be given hypodermically at once; fluid extract of ergot fzi Monsell solution mv to x and acetate of lead 3 grain, powdered opii gr. 1-4, every two or three hours; oil of turpentine mx every two or three hours. The quantity of food should be reduced in some cases, feeding should be suspended for twelve hours or more. Perforation and peritonitis are the most serious complications, and demand the immediate services of a competent surgeon as soon as detected. The early operations are attended with the best results. In all cases the patient should be supported by the administration of strychnin and quinine sulphate and salol or some other antiseptic for the bowels. If debility becomes extreme, aromatic spirits of ammonia or spirits of chloroform.

Convalescence should be carefully guarded.

The return to solid food should be extremely slow. Exercise should be of the most mild character for several weeks.

SOME POINTS TO REMEMBER IN MAKING EXAMINATIONS AND DIAGNOSIS OF DISEASES OF THE CHEST.*

By B. A. CAUDLE, Hopkinsville.

First, certain facts regarding the relation of the boundaries and lobes of the lungs, and the pleural sacs, to the external surface of the thorax, must be clearly in mind preceding an examination of these organs.

The lungs are situated in the thoracic cavity.

Each lung is conical in shape and presents for examination an apex, base, two borders and a surface.

The apex forms a tapering cone, extending well up into the root of the neck, 1 to 1 1-2 inches above the level of the first rib, (or clavicle).

A portion of the lung that's often neglected in our examination of these organs.

The base of the lung rest upon the convex surface of the diaphragm.

The right lung extends 1 to 1 3-4 inches above the clavicle, from which the anterior border runs downward, forward and inward, passing nearly behind the right costo-sternal articulation, to the mid-sternal line, to the level of the second rib.

From this point it runs vertically downward to the level of articulation of the sixth rib with the sternum, where it turns sharply to the right and becomes the lower border.

The lower border follows the sixth rib to the right mammary line, cuts the eighth rib in the mid-axillary line, and the tenth rib at the scapular line, and the upper border of the eleventh rib close to the spinal column.

For brevity remember front sixth, side eighth, back tenth rib.

In older people the lower border of the lungs extends one rib lower down. In children one rib higher up.

The left lung and its articular border, as far down as the fourth rib correspond to those of the right lung, except that this border lies farther from the mid-sternal line.

At the level of the fourth rib the anterior border curves outward, downward, and then moderately inward to the sixth rib, exposing a somewhat semicircular area of the pericardium, which is accountable for dullness on percussion, in this area (so-called exposed cardiac dullness).

From this point downward (the sixth rib) the lower border runs outward and around to

the spinal column. Its course corresponding in all respects, to that of the right lung, save that it lies a trifle lower.

The right lung is broader than the left lung, owing to the inclination of the heart to the left side, it is also shorter by an inch in consequence of the diaphragm rising higher to accommodate the liver.

Now that we have the topographical position of the lungs well in mind, we are ready to proceed with our examination. We should inspect the chest closely, observing whether the front back and sides look alike, normal or abnormal, whether we have an equal amount of expansion in both lungs or not. If one side seems much larger than the other, I usually measure them; then, too, it is a good plan in order to determine the amount of expansion. If the expansion is less than two inches in the male and two and one-half inches in the female, it is below the normal average, and may be indicative of many things, in acute troubles like pneumonia, pleurisy, or a fractured rib, the expansion is hindered by the pain it causes. It may also be due to phthisis, and should arouse our suspicion, especially if restricted to the upper third of the chest. If one side of the chest expands normally and freely and the other side hardly expands at all, it is proof positive that something is wrong or abnormal, and should cause us to continue our examination till a satisfactory conclusion is reached, the restricted expansion on either side may be due to an old pleurisy with extensive adhesion or to effusion or pus in either pleural cavity. We now count the respirations. The respiration rate in the new born is 44 to 50; at five years of age 22 to 28; in the adult 16 to 22; in health it is faster standing than lying down, during the day than at night, especially is asleep; after meals than when fasting, during excitement and exercise than when quiet. The normal ratio between pulse and respiration is 1 to 4, 4 pulse beats to 1 respiration; in disease the ratio may be as high as 1 to 8.

It used to be reckoned, before the days of fever thermometers, that every degree of fever ran the pulse up ten beats, and this with the feeling of the skin and volume of the pulse was the older practitioner's way of telling how much fever their patients had. We now know it was a very imperfect and unreliable guide by which to gauge the temperature.

VOCAL FREMITUS.

If a hand is laid on the chest while a patient speaks with ordinary or more than ordinary loudness, a peculiar buzzing or vibrating sound is felt by the palpating finger, (called vocal fremitus) or voice vibrations. The

*Read before the Christian County Medical Society.

vibrations originate in the vocal cords and are conducted by the columns of air in the trachea and large and small bronchial tubes, through the substance of the lungs to the chest wall. The intensity of the vocal fremitus depends upon two factors, first the loudness and pitch of the voice, and the varying conductivity, and, second, the thickness of the media through which the vibrations must pass.

To study vocal fremitus the patient is told to articulate certain words, one, two, three, and ninety-nine.

Solid lung tissue conducts the sound vibrations with great facility. Consequently the vocal fremitus is greatly increased in pneumonia and tuberculosis. However, pulmonary cavities, if thin walled and near the surfaces of the chest wall, may afford a very distinct fremitus, and can be explained by the cavity acting as a resonator for the sound of the voice. With marked dullness over the chest we naturally think of one or three troubles, pneumonia, pleurisy with effusion or tuberculosis.

As stated earlier in this paper, consolidated lung tissue is a great conductor of the breath sounds, consequently with pneumonia and tuberculosis we have an exaggerated vocal fremitus.

But with pleurisy with an effusion in the pleural cavity, unless you have bands of adhesions connecting the lung and pleural tissue you have a marked or total diminution of vocal fremitus.

In the last few years I have aspirated the chest twenty-one times for effusion of the pleural sack, and I do not now recall a single instance in which the vocal fremitus was not markedly diminished or absent.

Vocal fremitus is a diagnostic means that I am satisfied is not used enough in our examinations of the chest.

PERCUSSION.

I will now speak briefly of percussion. The percussion sound over the lungs becomes less resonant in proportion to the diminution in the amount of air underlying the part of the chest percussed. Consequently collapse or consolidation of the lungs or the presence of fluid in the pleural cavity renders the percussion sound over such areas more or less dull.

Consolidation of the lungs are found in pneumonia and phthisis. In order to cause appreciable dullness the consolidation must be at least one and one-half to two inches in diameter, and lie just beneath the chest wall or near the surface of the lungs. Many pneumonias of children centrally located in the lungs, surrounded by normal lung tissue and

involving small areas are practically impossible to locate by percussion.

Auscultation is by far the most valuable means at our command to determine normal or abnormal conditions in the chest, provided, we breathe properly, or inflate the lungs, while we are making our examinations, but as you all know and there are so many people, when we tell them to draw a deep or long breath, fix the respiratory muscles and swell up like a bull frog, and quit breathing at all I find it a good plan when we meet with this kind of person, to have them cough or count 21, 22, 23.

In auscultating the chest there are three kinds of sounds which are heard, normally, in certain parts of the chest. Two of these are types, the other two are combinations of the first two, they are, bronchial, vesicular, and broncho-vesicular, breathing. Bronchial breathing is heard over the trachea, just above the supra-sternal notch, described as blowing or tubular and is not heard only over or near the large bronchi in a normal chest. When heard it is usually indicative of some consolidation of the lung tissue (such as we have in pneumonia or phthisis, with consolidation or with a large cavity having free communication with a bronchus).

Broncho-vesicular breathing is neither bronchial or vesicular, and is sometimes spoken of as intermediate. It may be heard in the healthy chest over the lower portion of the manubrium, and over the interscapular region at the level of third dorsal vertebra, being due to the larger bronchi being within auscultating distance and a thin portion of lung tissue intervenes between the ear and large bronchi.

Vesicular breathing is described as soft, breezy sighing, resembling the rustling leaves in a gentle breeze, and should be heard during the whole of inspiration.

It is necessary to become thoroughly familiar with these three varieties of breathing and the special character which serves to differentiate one from the other, also to know as well in what part of the chest they are to be heard.

In many cases of pulmonary diseases the principal and important physical sign consists in finding one kind of breath sound where another should normally exist, for instance, should you hear bronchial breathing over the trachea just above the suprasternal notch you would think nothing of it, but should you get distinct bronchial breathing in the infrascapular notch, especially of the left side, you would be very suspicious of tuberculosis.

One other point I believe is worth mentioning, and that is, after you have gone over

both lungs pretty carefully and think you have located the trouble, go over the lungs closely again, especially the lung that you do not suspect as being diseased, and compare inch by inch, both by percussion and especially auscultation, the findings in both lungs, thus by comparing the two sides, you will notice that the breathing is not quite as vesicular in the diseased lung as in the normal one, and by comparison of the two sides you can make out some obscure incipient trouble that you would not find otherwise.

NEWS ITEMS AND COMMENTS

DR. E. M. WILEY.

The funeral service of Dr. Edward Maxwell Wiley, who died January 11, 1915, was held at the family home, 149 Woodland Ave. The Rev. I. J. Spencer, pastor of the Central Christian Church, of which Dr. Wiley was a member for many years, conducted the funeral services. Interment was made in the Lexington Cemetery.

The active pallbearers were: Dr. J. P. Warder, Dr. L. C. Redmon, Dr. C. B. Wilcott, Dr. C. A. Vance, Dr. W. S. Wyatt, Dr. E. B. Bradley.

The honorary pallbearers were: Dr. David Barrow, Dr. W. O. Bullock, Dr. F. H. Clarke, Dr. J. A. Stucky, Dr. B. L. Coleman, Dr. Geo. B. Sprague, Dr. T. H. Kinnaird, Dr. B. F. VanMeter, Dr. W. B. McClure, Dr. D. J. Healy, Dr. C. W. Norris, Dr. C. L. Wheeler, Dr. C. C. Garr, Messrs. H. H. Barnes, Alex Hall, Rudolph Harting, Roger Wilson, James G. Denny.

President-elect J. C. Lewis appointed Doctors Charles A. Vance, R. Julian Estill and L. H. Mulligan as a committee to draft resolutions, and Doctors Redmon and John W. Scott as a committee to purchase a fitting floral design.

Brief eulogies were paid the memory of Dr. Wiley, by Doctors J. W. Pryor and B. F. VanMeter.

A resolution of respect was reported by the committee as follows:

"In the announcement of the death of Dr. Edward Maxwell Wiley, the members of the Fayette County Medical Society have learned with keen susceptibility and unaffected sorrow of the passing of one of their most beloved and ablest members—their daily and intimate professional associate through the changing fortunes of many years. This sentiment is voiced in no conventional phrase, but comes home to each with a deep sense of direct personal loss and affliction.

"Dr. Wiley was born on a farm near Madison, Indiana, of a family which has given

more than one distinguished name to the country, in June, 1850, the son of Milton and Anne Elizabeth Bowen Wiley, and was consequently 64 years of age at the time of his demise. From what we have known of him through a period approaching half a lifetime of intimate social and professional association, all of his years were replete with usefulness and benefit to his fellowman. He was educated at Hanover College at Madison, in his native state, which has given, despite its limited pupilage, such an undue proportion of brilliant names to the professional and scientific life of the country. He was graduated as a physician from the Medical College of Indiana, at Indianapolis, in 1876, and at once entered upon the active duties of his profession in Trimble County, Kentucky, some years later removing to and establishing himself at Harrodsburg, which town from an early date enjoyed, as it still maintains, a marked reputation for the skill and ability of its medical faculty, among whom he rapidly found place in the front rank. It was while practicing at Harrodsburg that his growing reputation recommended him to the attention of Governor William O. Bradley, who, although the first Republican Governor of the State, tendered him the responsible position of Superintendent of the Eastern Kentucky State Hospital at Lexington. This position he accepted, and for nearly four years directed the administration of its many varied departments with singular force and ability. Here his gifts and abilities seemed to find adequate field of endeavor. He left it at the end of his term in many respects a different institution, and his keen judgment and insight, the strength of his gloved hand, left an influence for the better in many ways, the impress of which is even now markedly apparent.

"It may fairly be said that the full tide of his mature professional life but now began in a comparatively new community amid new associates where he had to recommend him only his native worth and the reputation he had been able to make in the seclusion of the hospital. It was a brave fight he entered upon and gallantly did he bear it. Steadily, year by year, did his practice extend with his growing reputation, nor had his capacities been measured or taxed when he fell, apparently at the beginning of a masterly career, which already placing him in the very front rank among the physicians of Lexington, would have placed him in no great time in a position of more than State-wide reputation. He fell in the hey-day of his activities, when a long and distinguished career seemed promised to open like a vista before him.

"Dr. Wiley was unquestionably, from what has been said, a physician of far more than

ordinary skill and judgment. He was rarely excelled as a diagnostician and in resource. His manner and bearing was of such rare quality that on entering the sick room, a burst of cheer and sunshine seemed to come with him, bringing courage and hope, and a silent tear will furrow the cheek of many a one who in the past as among his patients, has been the beneficiary of his skill and soothing ministrations, on hearing that his generous spirit has entered the Great Beyond.

"Unmoved, as we believe we are by any sentimentality of sudden affliction, it would not be difficult to point out many qualities possessed in striking degree by Dr. Wiley, not often found associated in a single character. But among them all, two stand out in transcendent prominence, as we now so vividly recall him—these were his innate courtesy and lofty courage. No provocation could move him to a vulgarity, no motive lead him to a littleness, no danger could bring a tremor to his hand or a pallor to his cheek. This man would have been, as he was, a gentleman had the accident of birth brought him forth in a hovel. His fine instincts would have asserted themselves amid any surroundings. He freely gave to all alike—the humblest in common with the exalted, the same gentle, the same lofty, but an obtrusive courtesy that the inborn dignity of his character exacted from others. Modest in asserting his own opinions formed incisively on the judgment of a clear mind, no argument nor persuasion could divert him a hair's breadth from that which he believed to be right. His professional life illustrated this day by day, while his small and modest participation of things political equally well bears out this assertion. His modest means, as his services, were ever open to the needy and distressed; the friend and encourager of the young and the timid, a heart beaming with kindness and an eye that with rare intuition overlooked no opportunity to extend the helpful hand or to utter the cheering word of encouragement—unselfish, unmarred by jealousy, steadfast, loyal, he disdained to wear the mask of any virtue he did not possess. He could overlook and condone the faults of others without tainting himself by the contact.

"Assuredly, if one noble life can in any degree enlighten and uplift those about him, then the world is the better for the career and the achievements of Edward Maxwell Wiley.

"Therefore, be it resolved: That a copy of these resolutions, duly attested, be tendered to the family of Doctor Wiley; that as a mark of respect we attend the funeral in a body

and wear the usual emblem of mourning for thirty days.

"R JULIAN ESTILL,
CHARLES A. VANCE,
"LOUIS H. MULLIGAN."

New Method of Round Ligament Fixation.—In Goodwin's method the abdomen is opened in the usual way, the round ligament separated, and by means of a ligature carrier, which has been thrust through the rectus muscle, drawn to the surface of that muscle. The loop of round ligament is held up by an assistant and the surgeon, either with scissors or scalpel, commencing at the site in which the ligament has been drawn through cuts for about three-quarters of an inch in length in the direction of the fibers and toward the pubis the rectus muscle and underlying tissues, including the peritoneum. The assistant then holds at the upper angle of this incision one side of the loop of round ligament and places and holds the other side in the lower angle. While so held the loop arches over the incision made in the rectus, one pillar being in the upper, the other in the lower angle. The surgeon, working under this arch, sutures together with catgut the edges of the incision in the rectus lying between the pillars held in the upper and lower angle, being careful to bring together the fibers of the muscle in the same apposition they were before incised. This leaves the loop of ligament resting on a bridge of muscle three-quarters of an inch long, one end of the ligament passing into the pelvic cavity through a small opening in the lower angle of the incision and the other through a similar opening in the upper. It is impossible for the ligament to get away from its moorings and drop back into the pelvic cavity. Although it is not necessary, the end emerging from the one descending into the pelvic cavity may be anchored at its site by passing one suture through it and the rectus muscle.

Infection of the Fetus.—Masay experimented with the streptobacterium fetidum injected gravid guinea-pigs with it. The placenta was no obstacle to its passage into the fetus, and it actually seemed as if the fetus served as a kind of "fixation process," the germs congregating in it and forsaking the maternal organism. Two hours after the injection of the germs they were evident in the fetal blood. Emptying the uterus thus clears out the hosts of germs that have congregated in the fetus. This suggests that abortion is a natural phenomenon of defense. It is possible that the germs in the maternal organism may go at once to the fetus apparently without infecting the mother.

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NEXT MEETING STATE ASSOCIATION, LOUISVILLE

COUNTY SOCIETY REPORTS

Bell—The regular meeting of the Bell County Medical Society convened in the parlor of the Pineville Hotel on Friday afternoon, November 13th, 1914, with Edward Wilson presiding.

The meeting was called to order at 1:30 and the regular program taken up in usual order. Under the head of new business, the matter of paying the Secretary a small salary, enough to defray the expense of stenographic work necessary, was discussed and laid over until next meeting. Under the heading of case reports, **Mason Combs** reported a case of "Appendicitis with Distended Gall Bladder."

T. T. Gibson reported a case of "Fibrous Adhesions of Bowels, with Constrictions."

Edward Wilson reported case of "Appendicitis."

E. M. Harrison a case of "Cancer of Uterus, with Accidental Cutting of Ureter during Operation."

B. A. Cockrell reported a case of fall from a tree resulting in fracture of femur and complicated by severe heart lesion.

L. L. Robertson reported a case of double foetation.

Mason Combs presented his paper on "Appendicitis by making a verbal report, and discussion of the subject, which elicited an animated discussion from a number of those present.

This being the last meeting of the year to be held in Pineville, Edward Wilson, the retiring President, had arranged for an elaborate entertainment and smoker to be held in the dining-room of the Pineville Hotel, and promptly at 3 o'clock, all the members present were escorted to the dining room, where the enchanting strains of music and the beautifully laid and decorated table, brought a smile of gladness to every face.

While seated at table, and before the meal was served, the accommodating photographer was ready to take a picture and every one was commanded to smile and look wise.

The hotel had supplied a well selected menu, which was served in good taste, and all those present lived up to their splendid reputation in performing gastronomic feats. The different courses were interspersed with a layer of medical mountain oratory, that would have brought a blush to the cheek of the immortal Patrick Henry, or Henry Clay. After all this array of "fuss, fun, and feathers," each one present left bearing away a beautiful carnation, presented as a climax to the menu, and feeling that the retiring President, had lived up to the motto of the Bell County Medical Society, "To do things as well, if not better, than any one else."

O. P. NUCKOLS, Secretary.

Bell—The Bell County Medical Society met in regular session at the offices of J. P. Edmunds,

Middlesboro, on the evening of December 11th, 1914.

The meeting was called to order at 8 P. M. by the President, Edward Wilson. The minutes of the previous meeting were read and approved.

There were no outstanding committees to report and under the heading of unfinished business, the society took up the matter of fixing a salary for the secretary sufficient to defray the expense of a stenographer, when needed. Dr. Mason Combs made a motion to allow the secretary \$30.00 per year, which was duly seconded and carried, with only one dissenting vote.

Under the heading of new members, the name of C. C. Durham was again brought before the society for consideration, but withdrawn until after the election of new officers.

J. W. Hamilton reported a very interesting case in lieu of the regular paper he was expected to read according to the program. His case report brought out a lively discussion of the subject presented. The other papers that were expected as per program, were not presented.

H. C. Chance was given the time to read a paper he had prepared for a previous meeting, upon the subject of "Medical Fads and Fancies vs. Medical Facts." The essayist presented the subject in his usual good style and sound common sense way, and brought out some very important subjects in the discussion that followed, among them being the subject of "Twilight Sleep." The question being asked "What attitude should the medical profession of Bell County take toward this growing popular fad?" The feeling seemed to be toward a very conservative stand in the matter of twilight sleep.

After the completion of the scientific program the matter of electing officers for the year 1915 was taken up, and the President called for nominations for President for the ensuing year.

B. E. Giannini put in nomination, **M. Combs**, of Pineville, and **T. T. Gibson** nominated **T. H. Curd**, of Middlesboro, and made the point that the Middlesboro contingency was entitled to the Presidency, this time, whereupon, **Dr. Combs**, with the consent of **Dr. Giannini**, withdrew his name and moved that **Dr. Curd** be elected by acclamation, which was promptly seconded and carried.

Jacob Schultz nominated **H. G. Petrie** for Vice-President, and it was moved and seconded that his election be unanimous. carried.

C. K. Broshear nominated **O. P. Nuckols** for re-election to the office of Secretary and Treasurer, which was duly carried by acclamation.

One member of the Board of Censors was to be elected and the name of **Jacob Schultz** and **F. R. Burton** were put in nomination, and the vote taken by ballot, which resulted in the election of **Dr. Schultz** by a majority of two votes.

This closed the election of officers, and the retiring President, **Dr. Wilson**, in a brief but

feeling way, extended to the society his very sincere appreciation for the hearty co-operation and many courtesies that had been shown him during the year, and predicted a great future for the Bell County Medical Society.

The newly elected president being absent from the hall, the Vice President-elect was invited to the chair for the purpose of organizing and outlining the plan of work for the new year.

The matter of providing for an annual program was taken up and after some discussion of the prospective work, the chair appointed a committee to arrange said program, and turn over to the Secretary to have printed at as early a date as possible.

The members of the program committee as appointed by the chair were, **C. K. Broshear** and **U. C. Brummett** of Middlesboro, and **Edward Wilson**, of Pineville, with the President and Secretary as ex-officio members.

There being no further business to come before the meeting the society adjourned to meet at Pineville on Friday afternoon, January 8th, 1915.

O. P. NUCKOLS, Secretary.

Breathitt—The Breathitt County Medical Society, composed of the physicians and surgeons of Jackson and nearby territory, met Tuesday night at the Trachoma Hospital, on East Main street, in its regular session, and after transacting routine business elected the following officers for the ensuing year: President, **Dr. T. F. Wickliffe**; Vice-President, **R. I. Kerr**; Secretary, **H. L. Biggs**.

The meeting was very interesting and only two doctors in the county were not present.

R. I. Kerr, the latest comer among Jackson's disciples of Esculapias, read an interesting and instructive paper on "Pneumonia," which paper was discussed by the members present.

It was definitely decided that the society would, in the very near future, give a banquet at some place in the town, present at which will be the doctors of the county and their wives, sweethearts or lady friends, depending on the state or condition of the aforesaid doctor.

This is as it should be and such things will help the cause in every way, advertising the profession, the hotels and the town. In union there is strength and in meetings around the banquet board there is fraternity and what we all need is more strength and more social and fraternal spirit.

H. S. BIGGS, Secretary.

Caldwell—The Caldwell County Medical Society met in the City Hall at Princeton on Tuesday afternoon, January 12, 1915, and was called to order by the President, **L. J. Spickard**. The following physicians were in attendance: **R. W. Ogilvie**, **I. Z. Barber**, **L. J. Spickard** and **W. L. Cash**.

Minutes of the last meeting, held last April, Ogilvie, P. R. Shelby, J. N. Bailey, J. M. Moore, were read by the Secretary, and approved. A motion by the Secretary and a motion carried that the communication relative to the Red Cross Work of the American Medical Association, was read and society co-operate in the work.

The following officers were elected for 1915: L. J. Spickard, President; I. Z. Barber, Vice President; W. L. Cash, Secretary-Treasurer; J. M. Moore, Delegate to State Association; R. W. Ogilvie, Alternate; Frank Walker, member of Board of Censors for three years.

A motion to adjourn carried.

W. L. CASH, Secretary.

Franklin—The Franklin County Medical Society met in regular session in the office of Drs. Williams & Mastin, January 4th, 1915, at 8 P. M. Present, H. S. Keller, President, in the chair; U. V. Williams, Secretary; Mastin, Heilman, Wilson, Reynolds, Montfort, Minish, Fish, Patterson.

The following members paid their State and County dues: U. V. Williams, F. W. Mastin, L. T. Minish, C. A. Fish, W. Montfort, Jno. Patterson, H. S. Keller.

Minutes of previous meeting read and approved.

Clinical cases discussed. First: Should every suspicious tumor in the female mammary glands, even when in doubt whether benign or malignant, be immediately removed or should the whole breast be amputated? This was much discussed.

H. S. Keller read a paper on the so-called Mouth and Foot Disease of Cattle Communicable to the Human Species." This was also most interestingly discussed, being a resume of the current literature of both secular and medical press.

U. V. Williams read a paper on: "Is the "Twilight Sleep." A general discussion resulted in condemning the propaganda as a fad.

After the business meeting, a social hour and smoker with refreshments was enjoyed. Altogether this was the most profitable and enjoyable meeting the society has had for years.

U. V. WILLIAMS, Secretary.

Greenup—The Greenup County Medical Society met at Greenup, January 7, 1915, in the office of A. S. Brady.

Members present, Drs. Morris, Fitch, Vidt, Brady, Meadows, Bryson, and Hunt.

The meeting was called to order by President Vidt.

A. S. Brady informed the society that it was against the rules of the State Association to make examinations for life insurance companies on policies of \$1,000, or more, for less than a fee of \$5.00 each.

C. E. Vidt read a paper on "Chloroform and Ether Anesthesia" which was very instructive and was discussed by all members present.

All members present paid their dues of \$3.25 for the year of 1915.

The next meeting will be held at the Davis Hotel, Fullerton, February 4, 1915. We expect to make this meeting one of the best as several doctors from Portsmouth, Ohio, have promised to attend.

A. P. HUNT, Secretary.

Harrison—The Harrison County Medical Society held its December meeting at the Elks Home, December 7, 1914. President H. T. Smiser called the meeting to order.

Minutes of the last meeting were read and approved.

Members present were Drs. Rees, Wells, Givens, Boyd, N. W. Moore, Vanderin, Lail, McDowell, Wood, Blount, Martin, W. B. Moore, Smiser, Swinford, Midden, Best.

Wolfolk Barrow, of Lexington, and Chas. Daugherty, of Paris, guests.

6J. W. Barrow reported a case of "Sarcoma of Colon," in patient 45 year old age in which difficulty in diagnosis from appendicitis was the peculiar feature.

Chas. Daugherty reported two very interesting cases. **J. E. Wells** reported a case of "Hemiplegia." These cases were freely discussed.

J. W. Barrow read paper on "Appendicitis," which was very much enjoyed.

The following officers were elected for the year 1915: L. S. Givens, President; R. K. Wood, Vice President; W. B. Moore, Secretary; B. B. Petty, Treasurer; Josephus Martin, Censor, for long term; N. W. Moore, the unexpired term of W. F. Phillips, whose untimely death occurred September 10th.

The society then adjourned to the dining room where an elegant banquet was enjoyed.

W. B. MOORE Secretary.

Owen—The Owen County Medical Society met at the office of J. W. Botts, on December 3rd, 1914. Members present, J. C. B. Foster, A. E. Threlkeld, J. W. Botts, D. E. Lusby, K. S. McBee, and J. H. Chrisman.

A. E. Threlkeld reported several cases of Scarlet Fever. Supposed to be contracted from cast-off clothing.

J. H. Chrisman reported case of rabies.

K. S. McBee reported case of heart block.

These cases were discussed by all members present.

After report of clinical cases we went into the election of officers.

A. E. Threlkeld, of Wheatley, was elected President; K. S. McBee, Owenton, Vice President; J. H. Chrisman, Owenton, Secretary and Treasurer.

Next meeting first Thursday in January, 1915.

J. H. CHRISMAN, Secretary.

KENTUCKY MEDICAL JOURNAL

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W. F. BOGGESS

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No. 4

EDITORIAL.

MUZZLE THE DOG.

Reports from the State Bacteriological Laboratory shows that rabies is unusually prevalent at the present time. Four persons have died of rabies in Kentucky in the last three months, two in Trigg, one in Owen and one in Caldwell county.

The dog population of the State is innumerable and many hundreds are stray and homeless creatures, these are the dangerous ones, and ought to be killed without ceremony. Half wild and usually ravenous for food they readily attack pets, domestic animals and human beings, and thus spread the dread malady, rabies, very rapidly. The surest way to stamp out the epidemic is to prevent the dogs from biting and this can only be accomplished by muzzles. Owners of dogs owe it to their neighbors and to themselves to see that their dogs if permitted to run at large are muzzled, and a combined effort should be made to kill the homeless dog. A relentless war ought to be waged by everyone against this homeless and worthless member of the canine family.

STATE BACTERIOLOGICAL LABORATORY HONORED.

The Rockefeller Commission paid a special compliment to the State Bacteriological Laboratory by the selection of Misses Loraine Sigmier and Alice Hayden, who have been the assistants of Dr. South from the time the Laboratory was established, to have entire charge of the Public Health Exhibit and Demonstrations at the Panama Exposition soon to be opened at San Francisco. This exhibit will be given in the Palace of Education, also referred to as the Palace of Social Economy, Unit 155, and it is hoped that every Kentucky physician who attends the Expo-

sition will see the work of these young women who have been so signally honored.

DR. CARSON'S TRACHOMA WORK.

Under Official Announcements Dr. James O. Carson, in an interesting and instructive letter to the State Board of Health, reports the results of his investigations of the trachoma situation in the Green River section, more especially in a section of Butler county, and probably extending into Edmonson and Grayson counties. This is the first authoritative information that has come to the Board of any extended infection in this part of the State and an effort will be made to establish a hospital for the treatment of all who desire it at the point indicated in the letter. This was a labor of love on the part of Dr. Carson, undertaken at his own expense and he will give his cordial cooperation to the authorities in preventing the further spread of the disease, and in its treatment, as soon as the hospital is opened.

WHAT PHYSICIANS MUST DO TO CONFORM TO THE U. S. NARCOTIC LAW.

1. Make application to the Collector of Internal Revenue of your District for registration upon blank to be obtained from such Collector; and pay the required tax. Do this as soon as possible. Don't wait until the last moment.

2. Make application to the same official for the number of order forms wanted and tender payment for the same at the rate of \$1.00 per hundred. Application should be made on blank to be obtained from the Collector of Internal Revenue.

3. March 1, 1915, take an accurate inventory of every item in stock coming under the operation of the law.

4. Make all orders for drugs coming un-

der the operation of the law in duplicate upon order forms secured according to paragraph 2 above, and keep copy on file for two years.

5. Keep a record of the drugs coming under the operation of the law dispensed or distributed (except when dispensed or distributed directly to patient) showing: 1, date when such drug is dispensed or distributed; 2, kind and quantity dispensed or distributed in each case; 3, name and residence of the person to whom such drug was dispensed or distributed. This record must be kept for two years subject to inspection.

6. Druggists cannot fill prescriptions unless: 1, the prescriber has registered under the Act; 2, the prescription is dated as of the day issued and signed by the prescriber; 3, the prescription gives the office address and registry number of the prescriber.

It must be remembered that this is a federal law and does not in any particular make it unnecessary to observe state and municipal antinarcotic laws.

THE NEW NATIONAL NARCOTIC LAW.

After a somewhat checkered career in Congress the much discussed Harrison bill has passed both houses and on December 17 was approved by the President. It takes effect March 1, 1915. It applies to every physician, dentist, and druggist in Kentucky. Its provisions and penalties are so drastic and far-reaching that it seems best to insert a full abstract of the law in this issue and to urge all members to secure licenses before it goes into effect.

The bill is the outcome of the three International Opium Conference which met at Shanghai in 1909 and at The Hague in 1911 and 1913. These conferences mark the peaceful passing of a dispute which has lasted over two centuries and over which wars have been waged. Primarily, the conferences were called with a view of aiding China in her attempt to protect her people from the ravages of opium that threatened to destroy her.

Investigations by our own commissioner prior to his attending the first conference at Shanghai, disclosed an appalling state of affairs at home and showed that our people were in almost as much danger from the use of narcotic drugs as were the Chinese. Whereas our medicinal use of opium might run to 50,000 pounds yearly, we were nevertheless importing annually nearly 400,000 pounds. Germany with her 65,000,000 people only consumes 17,000 pounds per year, so that our consumption was evidently far in excess of what could possibly be used for medicinal purposes.

Alarmed by the outlook and urged by rep-

resentations from the American Pharmaceutical Association and from many medical sources, Congress passed in 1909 a bill prohibiting the importation of opium into the United States, except for medicinal purposes.

This did not help matters much, even with the aid of more stringent laws passed by many states. So the Harrison Bill is an attempt still further to control the traffic, and by keeping strict track of all the channels through which the drug is distributed, from the time it is received at the ports of entry in this country until it reaches the patients, it is hoped that an end may eventually be made of what threatened at one time to become a great national vice. This law, known as the Harrison Bill, provides for the registration with collectors of internal revenue of all persons who produce, import, manufacture, sell or dispense opium and coca preparations and it imposes a tax on all such dealers. It may be summarized as follows:

(1). All persons handling opium, even leaves or any preparation thereof, including alkaloids and their salts, must register their names and addresses with the collector of internal revenue for their district.

(2) The license tax is \$1.00 per annum which must be paid before one can handle any of the drugs specified, except that only thirty-four cents may be paid for the balance of this fiscal year, which ends June 30, 1915.

(3). None of the drugs can be sold except on a written order which must be on a form to be issued by the Commissioner of Internal Revenue. All orders must be kept for two years and must be accessible to inspection. The order blanks will be sold by the various collectors and stamped with the buyer's name and license number to prevent use by others. The price will be \$1.00 per 100.

(4). Reports of receipts and sales must be furnished as required.

(5). Possession of any of the specified drugs by any unregistered person is presumptive of violation of the law.

(6). Violations punishable by fine up to \$2,000 and imprisonment up to five years.

Nothing in the law interferes with the dispensing of physicians', dentists', or veterinarians' prescriptions, but these must be kept for two years, and physicians, etc., must keep records of all drugs specified which they dispense or use personally.

The act does not apply to the sale of preparations containing not more than two grains of opium, one-fourth grain morphine, one-eighth grain heroin, one grain of codeine in each ounce, nor to preparations for external use only. Cocaine, alpha, or beta eucaine and their salts and any synthetic substitute for them are included, no matter in what form

they may be prepared. Finally, nothing in the law is to interfere with the Food and Drugs Act or the opium importation acts, the purpose evidently being to reinforce and support these laws.

WHY?

This JOURNAL has an occasional query from one of its readers (who own and direct it, and have a right to direct its action) as to why it carries the advertisement of Old Taylor Whiskey. In view of the necessities of medical practice, we have no apology to make for accepting this advertisement, but a word of explanation is to be expected. Knowing that most of the members of the Kentucky State Medical Association are not only total abstainers themselves, but that many of the leaders of the profession never prescribe alcohol in any form, it is natural that inquiry should arise on this point, and the criticism, from this view-point, of the JOURNAL'S course is proper.

On the other hand a considerable number of the profession do prescribe alcohol. Our conception is that rectified whiskey is a poison always and that this is just as true when it is bottled in bond as when it is thinly disguised by some bitter herb and called a patent medicine. There are doubtless other plants which make a straight, honest, old-fashioned whiskey which is the only really available form in which alcohol is used as a medicine in this country. Those of our readers who still use whiskey as a medicine naturally want to know where the best can be gotten. There are comparatively few potent drugs which fail to do harm if used in overdose. We do not believe whiskey of any kind should ever be used as a beverage, and we are confident it should very rarely if ever be used as a medicine, but if it is indicated, in the opinion of a physician, he should insist on the simon-pure article. This is why we carry the Taylor advertisement!

Phenol-Camphor Treatment of Suppurating Process.—Kanjety says that he has been using this method of treatment for years for purulent phlegmonous processes and with good results. Chlumsky's original formula seems to him the best. This is 30 parts liquified phenol and 60 parts triturated camphor with 10 parts alcohol. It is especially useful in pyocyaneus infection and tetanus, but there is danger of phenol poisoning if used too profusely in large cavities. He moistens gauze with the solution, wrings it out and covers the lesion with the gauze. He says we must not rely too implicitly on the alleged paralyzing of the phenol by the camphor.

PROFESSOR THOMPSON AND ILLINOIS METHODIST MINISTERS ON WINE OF CARDUI.

A remarkable controversy has been precipitated by a most interesting article entitled, "Press of the Methodist Episcopal Church—Is It Muzzled?" by the Hon. S. H. Thompson, State Superintendent of Public Instruction, in Tennessee, and formerly a secretary of the General Conference of the Methodist Church. Briefly Prof. Thompson says that the Journal of the American Medical Association has published an expose of Wine of Cardui. It seems that the senior partner in the firm which manufactures Wine of Cardui has occupied a very influential office and personal position in the Methodist Church. Among other things, he has been Chairman of the Book Committee, from which he has recently resigned, which controlled the official press of the Methodist Church. All of the Methodist papers had been asked to publish a protest signed by thirty-two Illinois ministers, which was headed, "Mr. Patten and the Methodist Episcopal Church." It appears that this protest was not published in any Methodist paper until after Mr. Patten's resignation as chairman of the Book Committee. The manufacturers of Wine of Cardui have a number of suits for libel pending against the American Medical Association and its editor, and Dr. Oscar Dowling, the president of the State Board of Health of Louisiana, and Harper's Weekly for various allegations in regard to this alleged remedy.

The Illinois ministers, among other things, say, "The question, therefore, for the Methodist Episcopal Church to decide is whether they desire in place of high leadership a man who is selling a medicine consisting of one-fifth pure alcohol; nay more, who is urging through large advertising the buying of this medicine. The outcome of the suit has nothing to do with the answer of the church to this question. Lager beer contains two to three per cent. alcohol, ale, porter and export beer contain three to six per cent. alcohol, champagne contains eight to ten per cent. alcohol. The dose of Wine of Cardui is, according to label, one tablespoonful—half an ounce—to be taken three or four times a day. We are reliably informed that every tablespoonful contains forty-eight drops of pure alcohol or the equivalent of about one hundred drops of whiskey. The girl or woman who takes four table spoonfuls of this nostrum daily, therefore, gets the same amount of alcohol that she would obtain if she took four hundred drops of whiskey, or, to put it another way, the same amount of alcohol as she would get from one quarter of a pint of champagne or about two thirds of a bottle of beer. The

Chattanooga Medicine Company is therefore recommending to the girls and women of the country that their strength would be greatly increased by drinking the equivalent of two thirds of a bottle of beer every day until they feel that they are entirely well. * * *

Again, we reiterate, this has nothing to do with Mr. Patten's suit against the American Medical Association. Even if he should gain the suit and recover three hundred thousand dollars, it would not in the least decrease the fact that he has been making money by encouraging the use of a so-called remedy which contains twenty per cent. of alcohol, double the amount contained in champagne, or three times the amount of alcohol contained in the heaviest beer sold in the market." This earnest protest is signed by thirty-two active ministers of the Methodist Church, and we have quoted it from the February 10th issue of the *Kansas City, Missouri, Central Christian Advocate* which devotes practically the entire issue to this matter.

In a very interesting editorial, the editor of this important Methodist publication squares himself under four heads as follows: First. Personally, we do not believe in self-medication.

Second. We do not believe in a medicine with a strong alcoholic base.

Third. We disapprove absolutely of advertising methods which are improper.

Fourth. We disapprove of its flamboyant advertising.

Under each of these heads, enough verbiage is introduced to give both sides of the question, if it can be said that there is a side for a nostrum of the class to which Wine of Cardui apparently belongs, but there can be no question in the minds of those who are informed on the subject that when this entire matter is thrashed out, that the Methodist Church will ring true in regard to it, and that to no small degree this will be due to the courageous attitude of Prof. Thompson who writes, apparently, as a reluctant witness against a warm personal friend.

Veneral Disease and War.—In the course of his long study of this subject, Finger states that even on a peace footing there is a daily average of 1,748 men under treatment for venereal disease in the Austrian army. During war time the proportion usually increases as he shows by statistics from one army corps in the Franco-Prussian War (first Bavarian): in 1871 the proportion ran up from 10.2 per thousand in January to 77.7 per thousand in May. Extensive epidemics in various districts followed the disbanding of the troops at the close of that war.

SCIENTIFIC EDITORIALS.

TONSIL TALK.

The common experience in medicine of the adoption of new methods of diagnosis and treatment, then their abuse by the profession and a final reaction resulting in partial or complete abandonment of the method is just being exemplified by the turn in the tonsil operation. It is not strange that the introduction of the operation of tonsilleotomy, a surgical method which enabled the operator to completely enucleate the tonsils, should be followed by a revolution in the indications for tonsil surgery.

It gave us the means of relieving those cases of recurrent peritonsillar abscess formation for which we formerly knew no cure and the cases of recurrent tonsillitis where the submerged nature of the tonsils precluded the possibility of relief by the older surgical that the tonsils bear a relation to general means.

The new operation also led to the discovery conditions and that by their removal rheumatism, septic endocarditis, certain forms of skin trouble, nephritis, and other diseases due to toxic conditions of the blood are sometimes cured by enucleation of the offending tonsils.

Fortunately the method of operation was so well received that it soon went the way of many new discoveries, being promiscuously employed irrespective of age, or conditions. By some it was looked upon as a panacea for all ills to which the body is heir.

The natural reaction has followed and it is not uncommon now to find among physicians as well as among the laity many who have developed a prejudice against the removal of tonsils by any means.

Most of this prejudice is based upon the assertion of some physiologists and surgeons that the tonsils have an important function to perform especially in early child life. It seems that this hypothesis is based upon theory rather than facts for no one has been able to determine of what use the tonsils are, and there is now doubt in the minds of many whether the tonsils have a function to perform at an ytime of life.

Dr. Ernst Winckler, of Bremen, in some recent research work in an endeavor to determine the significance of the tonsils during childhood, came to the conclusion that the physiological function of the organs has been overestimated. He repudiates the original

theory of Henke, that the lymphatic vessels carry foreign elements to the tonsils to be thrown off in the faucial spaces.

To disprove the Henke theory, Winckler points out the fact that healthy tonsils do not destroy or throw off bacteria as is evidenced by the passing of tubercle bacilli through the tonsils without causing a disturbance there to reach the lymphatic glands in the neck and set up a tubercular process. He also points out that bacteria which have caused an acute tonsil inflammation can be found months later in the tonsillar crypts.

He examined histologically a great many tonsils removed from children 2 to 6 years old, and found marked pathological changes in most of them.

In his experiments he also examined the blood of twenty children before and after tonsillectomy, to determine the influence of the operation upon the hemoglobin amount in the blood. He found that in all but one child the hemoglobin was increased from 54 to 67 per cent. before the operation to 65 to 80 per cent. after the operation. In the one case there was a slight decrease.

All of these findings led Winckler to conclude that the tonsils play no part in the development of the growing child and that there should be no difference in the surgical treatment of tonsils in childhood and in adult life.

It is interesting to note that most of the European laryngologists are now advocating the complete tonsil enucleation, even in childhood rather than tonsillotomy. As late as three years ago when the writer visited some of the clinics abroad, only a few operators were employing tonsillectomy and only on selected cases, most of them employing the old operation.

At the International Medical Congress held in London last year, papers dealing with the tonsil question were read by Burger of Amsterdam, who contended that tonsillotomy should be the operation of choice in child and adult and Goodale, of Boston, who favored the removal in capsule. Goodale based his opinion on the facts that a deleterious effect upon the development of the child after tonsillectomy has never been proven and that the complete enucleation removes all foci of infection.

From the discussion which followed these papers the attitude of the profession towards the two operations becomes apparent.

Jacques (Nancy) could see no greater harm in the removal of an entire tonsil than in removing an entire infected lymphatic gland and strongly advocated tonsillectomy.

E. D. Davis (London) in a study of 5700 cases operated on at the Charing Cross Hospital, found that many of the cases of tonsillotomy were followed by lymphadenitis, while

those subjected to tonsillectomy were not. He also reports decidedly more bleeding after tonsillotomy than after complete removal in capsule. In every case of tonsillectomy done in singers there was an improvement in the voice. He advocates tonsillectomy in every case.

Tretrop (Antwerp) employs tonsillotomy in children with hyperplasia and tonsillectomy in children with submerged tonsils and in adults.

O'Mally (London) mentioned many affections of the nose, throat, ears, lungs, and the entire organism due to diseased tonsils and advocates complete removal for their cure.

Whale (London) had studied clinically over 3000 cases of tonsil operation of both kinds. While he considers tonsillectomy somewhat more dangerous on account of the greater danger of hemorrhage he prefers the operation to the clipping operation as it safeguards the operator against recurrence of tonsillar disease.

Foulder (London) also advocates tonsillectomy and believes that there is no more danger of bleeding than after tonsillotomy.

Luc (Paris) advocates tonsillotomy in children and gives as his reason that the transitory anesthetics he employs (brom-ethyl or ether) are too brief to enable the operator to enucleate properly. He employs tonsillectomy entirely in adults.

Pybus (New Castle on Tyne) tonsillectomy for all cases except simple hyperplasias.

S. S. Whillis (New Castle on Tyne) favors tonsillectomy and says that the operation has been done sufficiently long to show that the complete removal of tonsils exerts no deleterious influence over the body.

H. Tilley (London) employs tonsillectomy in 95 per cent. of his cases and favors it because it does away with the unpleasant necessity of a second or third operation.

W. Syme (Glasgow) tonsillectomy in all cases.

Kubo (Japan) employs tonsillectomy only in cases where tonsillotomy has failed.

Sobernheim (Berlin) although of the belief that all cases in need of tonsil operation should not be subject to tonsillectomy, advises enucleation especially in tuberculosis and primary syphilis of the tonsils, recurrent tonsillitis, endocarditis and nephritis.

Marschik (Wien) spoke of the change in Chiari's clinic in favor of tonsillectomy and reported cases of peculiar endocranial disease resembling basilar meningitis which were cured by tonsillectomy.

Max Halle (Berlin) employs tonsillectomy but not in simple hyperplasia.

From this discussion it is evident that the

complete operation is with but few exceptions the operation of choice in Europe.

The foreign operators differ in the details of their technique just as we do here. Most of them report less bleeding after this operation than after tonsillotomy.

After all that has been said and written regarding tonsil surgery the following conclusions seem justifiable.

First: That tonsillectomy is at present the operation of choice for the removal of tonsils, in this and in foreign countries.

Second: That the danger of an immediate complication or hemorrhage is no greater after tonsillectomy than after tonsillotomy.

Third: That the danger of remote results upon the body after tonsillectomy, even in very young children, has not been clinically or experimentally proven.

Fourth: That a careful, conservative study of each case should be made before suggesting either tonsil operation, and that the promiscuous removal of tonsils, which are creating no disturbance should be described.

Fifth: That the indications for tonsil surgery are the same as they have always been, viz: the presence of very large tonsils, whose mechanical presence is a detriment to breathing and phonation—recurrent phlegmonous peritonsillar abscesses, frequent recurring acute follicular tonsillitis, and recurrent lymphadenitis, but with the addition of some of the less frequent indications introduced with the advent of the complete operation, such as rheumatism, skin affections, endo-ear-ditis, nephritis, etc.

ADOLPH O. PFINGST.

Puerperal Tetanus.—Spiegel adds four cases from his own practice to the sixty-two he has found in the literature in which tetanus developed soon after an abortion or birth of a child. In only one of his cases was the correct diagnosis made at once. He tabulated the details of the entire list and comments that early diagnosis and intravenous and intraspinal injection of antitetanus serum are the main reliance, clearing out the focus by rinsing and curetting the uterus. For this 70 per cent. alcohol seems to give the best results, as the tetanus toxin is precipitated by alcohol, and the spores deprived of their toxin are less dangerous. He advises tamponing the uterus with antitetanus serum, renewing the tampons each day; if the cervix is not dilated, daily rinsing with alcohol may suffice. Of all symptomatic measures to arrest the spasms, intraspinal injections of 5 or 10 c.c. of a 15 per cent. solution of magnesium sulphate seem to be most effectual. The patient's strength must be kept up with nourishing food. The conditions in the puerperal uterus favor absorption so that the incubation phase is comparatively short.

CERVICAL LYMPHADENITIS.

Infection of the cervical lymph glands is very common in young children, more so than at any other age. This is due to the numerous sources and revenues of infection in the young; the mucous membrane of the mouth is more tender than that of the mouth of the adult, there are more occasions for the infection; a baby is fed more frequently with the danger of infection from the nipple; the food is probably not so sterile as the food of the adult; they often pick up dirt on the hand; the teeth have to erupt through the mucous membrane. Then the dangers of contagion from kissing children are multiplied, the contact with other children is closer, the digestive system is more easily upset with the attendant changes in the mucous membrane of the tongue and mouth. Infection in the anterior portions of the mouth and teeth drains into the lymphatic glands which lie underneath the lower border of the inferior maxillary bone. Infection of the nares and of the tonsils results in the enlargement of the lymphatic glands which lie below the angles of the lower jaw and anterior to the sterno-cleido mastoid muscle. When the infection is in the rhino pharynx especially about the inner opening of the Eustachian tubes, it usually descends to the deeper set of lymphatics and to those which lie posterior to the sterno-cleido mastoid muscle. By noting the location of the enlarged gland we can form a correct idea of the infected point which we are thereby enabled to reach and treat in most cases.

When the glands are acutely inflamed a moist heat applied externally will often enable them to overcome the local infection and is probably more satisfactory than ice application which are often very depressant to young children.

In the more chronically inflamed glands in which there is a good deal of hypertrophy and hyperplasia there is a tendency in the feeble children toward the breaking down and discharging externally of pus. If it is necessary to evacuate the pus it is best to make an incision in the line of the fold of the neck so that the scar will not be so obvious. The gland when opened will continue to discharge pus until all of the contents have been eliminated as a rule; occasionally it is necessary to reopen the incision. It is possible many times, however, to prevent the breaking down of the tissues by the administration of the iodides in the form preferably of syrup of iodide of iron which should be given in large doses. At times the organic iodine compounds seem to be more effective than the ferrous iodide. External applications are often of advantage and a gentle massage with

the milder iodine or ichthyol compounds will often prove helpful. Many cases of chronically enlarged lymphatic glands have been benefited or cured by the internal administration of sea salt water, which has seemed at times to reach glands which did not respond to other medication.

One must always bear in mind that an enlarged lymphatic gland is a diseased and disabled gland, that the focus of infection wherever located remains open to contact with currents of air. It is highly probable that tubercle bacilli will gain entrance into the lymphatic channel. It is important, therefore, that these cases be watched and followed up and every effort made to relieve the diseased condition of the glands. It is imperative that such cases be absolutely protected from the possibility of infection from members of the family suffering from tuberculosis. Though nature often seems able to handle such infections the risk that is run is wholly unnecessary and inexcusable.

PHILIP F. BARBOUR.

OXALURIA.

One who specializes in diseases of the skin will be surprised at the association of oxaluria with chronic and particularly stubborn skin diseases. This fact was also substantiated by our colleague and able pathologist, Dr. E. S. Allen, who as the head of the Louisville Research Laboratory, used to do our analytical work. In our own laboratory where urinalysis is made on every subject afflicted with skin diseases, the same phenomenon was observed.

Anders and Boston, however, have found calcium oxalate present in the urine during the course of chronic diseases of the skin. They state that "localized erythematous areas affecting the backs of the fingers, the nose, eyes, lips, and, rarely, portions of the chest and abdomen disappear when oxaluria subsides as the result of treatment. Decided itching of the skin particularly at the junction of the skin with the mucous membrane, appears to be occasioned by the excretion of oxalic acid."

Vaughan attributes the association of oxaluria with skin diseases to the effect of loss of skin function and not to the cause of the skin lesions. While we are yet unable to determine a definite type of skin lesions associated with oxaluria, the subject is quite worthy of studying.

There are, according to Leeper, two forms of oxaluria: physiological oxaluria (0.015—0.02 grms. to a liter) which increases with the intake of pure oxalic acid or with substances (peas, mushrooms), containing oxalic acid. Evidently this form of oxaluria increases with

consumption of food rich in gelatine and anclein. It is also increased by consumption of a large amount of spices.

Pathological oxaluria is quite often seen in diabetes (not depending upon the quantity of glycosuria), in obesity, oxalic diathesis, podagra, chronic rheumatism, liver affection, psoriasis and eczema.

It is rather a peculiar occurrence that during acute infectious diseases oxaluria almost disappears, reappearing in full strength after convalescence.

Regarding the retention of oxalates in the system, it cannot be determined by urinalysis alone but it can be determined by its quantity in the blood. It is rather a difficult matter to determine the amount of oxalates in the blood. Garrod, Cautout, Teissier and Roques were the first ones to take up this work. But their technique is rather complicated and not so satisfactory as the new methods. With the new method it was found that the accurate amount of oxalic acid can only be determined with large quantities of blood and the chemical technique must be absolutely perfect. Loeper and Beecham Tounet have perfected the last method with molybdate salts. In the normal state blood contains only the minutest traces of oxalic acid.

In the human body oxalic acid is found in many organs in which occurred tissue destruction, particularly in the liver, kidneys and brain. Oxalic acid is also contained in the organic fluid, but in which ones we know not. Besides the exogenous origin, oxalic acid may be found in the tissues. The oxalic content is increased in liver troubles, in nervous troubles and at the menopause. The kidneys excrete only 20 per cent. of the oxalates taken in the form of food, the rest being destroyed in the intestines by bacteria. It can also be found in the lower bowel and also in some tissues, particularly of the kidneys, liver, nerves, intestines and bones. It is also found in pathological secretions. When it comes in contact with lime it forms oxalate of calcium. In the blood it is often found in the form of carbon dioxide and carbonate of lime.

Some organs (kidneys and liver) may sometimes destroy the oxalic acid without forming Co and Co_2 .

In regard to the toxicity of oxalic acid and its soluble salts, it was found that it causes respiratory derangements; first acceleration, then slowing up and cessation; heart symptoms; temporary increase of blood pressure; then gradual decrease and paralysis of the heart muscles; nervous disturbances are also observed. Simultaneously we may also notice mydriasis, diarrhea, decrease in coagulability of the blood, anaemia with leucocytosis and slight eosinophilia.

It was demonstrated clinically that doses from 15 to 30 grms. of oxalic acid cause vomiting, due perhaps to the irritation of the mucous membranes. It was followed by nervous phenomenon, respiratory derangements, low blood pressure, oxaluria and albuminuria. If the dose is not fatal, the patients recover but nervous and kidney derangements may remain for a long time. At times we may get accidental food intoxication by ingestion of large amounts of rhubarb, cocoa and chocolate, causing bowel spasms, nervousness, albuminuria and sub-acute rheumatism of the fingers.

What is the treatment for these conditions? It is not customary to suggest treatment in editorials, but since some of my friends asked me to express my opinion in regard to the latest methods of therapy, we would suggest the following: (1) dietary regime, avoidance of tea, cocoa, chocolate, pepper, tomatoes and rhubarb; limitation in the amount of meat, avoidance also nuclein, protein substances and gelatin. (2) Advocacy of consumption of alkaline water; administration of calcium and magnesium salts. (3) Administration of mild laxatives and diuretics, particularly urotropin. (4) Rest, mild outdoor exercise and non-use of tobacco in any form. (5) Pleasure trips to some springs are very beneficial.

M. L. RAVITCH.

Tetanus.—Six articles are devoted to this subject, relating experiences with tetanus among the wounded. Hochhaus has had 46 cases, Kreuter 31, Rothfuch and Alexander 10 and 8. Muller has found long hot baths a remarkable relief for the patients, and Rothfuchs reports benefit from salvarsan in 4 cases. Some claim great benefit from magnesium sulphate; others have nothing good to report from it. Alexander states that his 8 patients given 10 gm. of chloral in a single dose each day have all recovered; 2 given only 5 gm. died. Muller comments on the extreme relief afforded by tracheotomy in some cases. One of his 2 tracheotomized patients is apparently recovering. The other succumbed to weakness of the heart after subsidence of the tetanus.

Mechanical Devices for Correction of Writer's Cramp.—Meyer treats the spastic forms of writer's cramp by having a hollow cast made of the hand in the proper position for writing. It forms thus a kind of rigid half glove fitting over the fingers and holding them immovably in the proper position for writing, thus preventing any contracture until the hand outgrows the tendency. He gives illustrations of the cast made in two cases and used with complete success.

OFFICIAL ANNOUNCEMENTS

TRACHOMA INVESTIGATION IN THE GREEN RIVER SECTION OF SOUTHERN KENTUCKY.*

By J. O. CARSON, Bowling Green.

Believing that the regular health authorities are the proper ones to handle such matters, I wish to make the following report, though the trip was made on my own initiative and at my own expense.

The success of my expedition was so great, I constantly regretted your inability to accept my invitation to accompany me as my guest, for you could have seen conditions more plainly than I can state them to you.

During my special practice of more than twenty-five years, in this and adjoining counties, many cases of trachoma and allied diseases have come under my observation, which has been supplemented by that of Expert Examiner for the United States Pension Department.

I have noted that one particular section of the surrounding country has contributed more cases than any other. This covers a large part of Butler county lying on the north side of Green River.

For a number of years, I have wished to thoroughly investigate the prevalence of trachoma and the allied conjunctival diseases, in that locality, so decided to spend my vacation for that purpose.

On October 27th, in company with my assistant, I went to Morgantown, having previously arranged with the County School Superintendent, Mr. A. L. Haynes, and some of the local doctors, spent the 27th, 28th and 29th making as careful an investigation as possible in that time.

I concluded that the examination of the eyes of the school children would be the best index of the general home conditions; so spent the time visiting the various schools in the districts, where I wished to confine my investigations.

The first day, Drs. J. H. Austin and G. E. Embry accompanied us; the second day Dr. Embry was our most efficient guide. On the morning of the third day, Superintendent Haynes, Drs. Austin and Embry were all with us part of the time, then Dr. Austin piloted us; in all we visited 15 schools and examined a few pupils from two other schools not in session.

We found that from 10 to 80 per cent of the children had trachoma or allied diseases of the conjunctiva. In the schools of the

*A report made to the State Board of Health.

three adjoining districts, the average ranged from 60 to 80 per cent.

Upon inquiry of those infected, we nearly always found that the mother or the father was also afflicted. When there were several children of the same family in school, and the examination of one of them showed diseased eyes, our surmise would be, that the others were also infected, the examination usually affirming this opinion.

We carried some simple remedies, on the trip, for gratuitous distribution among the children, but acting upon the suggestion of one of the teachers, that they be given these medicines so they could help their pupils, I saw the wisdom of her remark, so demonstrated and instructed them as to their use, and at the same time, I explained these were simple things, not expected to cure, but would better and improve conditions, and, to some extent help to prevent further spread of their eye troubles.

I suggested and urged the use of such sanitary measures, which would tend to check and prevent the spread of these diseases, urging the teachers to continually impress upon their pupils the necessity for obeying these instructions, thereby benefitting the welfare of the pupil, also the teachers would reap the advantages of a large attendance, as the salary paid is on a percentage basis.

I stated that my aim was to get the United States Public Health Service to establish a treatment station, at some convenient point, (I think I have been able to locate this point), and do more good than I could do. The treatment is a problem requiring a long time to obtain a permanent cure, longer than they can stay from home. The children must be cured, and further spread be stayed. I feel that some good has been accomplished, that a start has been made, and, in the spring, I shall go back, trusting to do more and to perform such operations as are needed and deemed advisable, leaving my assistant there for a time to care for these patients.

I want to go back year after year, spending my vacation among these sturdy, excellent people, performing this little mission, doing more and more each time.

I wish to say I never met more hearty co-operation in any work, than was given me by the school authorities, teachers and pupils.

My sincere thanks are due Drs. J. H. Austin and G. E. Embry, who gave their entire time and assistance in this work.

We made more accurate data concerning each district, but which is unnecessary to place in this article.

THE NEW FEDERAL ANTI-NARCOTIC LAW.

AS IT APPLIES TO PHYSICIANS, DENTISTS AND VETERINARY SURGEONS AS CONSTRUED BY KENTUCKY BOARD OF PHARMACY.

THE LAW AS APPLICABLE TO THE PHYSICIAN, DENTIST AND VETERINARY SURGEON.

1st. Every physician, dentist and veterinary surgeon who *produces, imports, manufactures, compounds, deals in, dispenses distributes or gives away* opium or coca leaves or any compound, manufacture, salt, derivative or preparation thereof shall register with the Collector of Internal Revenue for the district in which he conducts his business by March 1st, 1915, and pay a special tax of One Dollar. The Government Special Tax Year ends on June 30th, consequently on March 1st, 1915, the Collectors will only accept special tax for four months amounting to 34c. It will, therefore, be necessary to register on or before March 1st, 1915, and again July 1st, 1915.

2nd. Physicians, dentists and veterinary surgeons *after complying with the above provision can write prescriptions for these drugs, which prescription must be dated, in writing and for a definite quantity, bear the patient's name and address, and must be signed by the physician, dentist or veterinary surgeon in full on the day he issues the prescription, and said prescription must bear the physician's, dentist's, or veterinary surgeon's registry number and address. Prescriptions for these drugs cannot be refilled or given over the telephone.* Druggists cannot fill the prescriptions of physicians, dentists or veterinary surgeons who have not registered as provided for by law, or whose prescriptions do not meet all of the above requirements.

3rd. No record need be retained of prescriptions written.

4th. Physicians, dentists and veterinary surgeons can only purchase these drugs for their *personal practice or office use on official forms* furnished by the Collector of Internal Revenue. *Such forms must be made in duplicate, and the physician, dentist and veterinary surgeon is required to retain copy two years. Original must accompany the order.* All duplicates are open to inspection to Federal, State and Municipal Authorities.

5th. Physicians, dentists and veterinary surgeons need not keep a record of doses given or administered by him (either by mouth or hypodermatically) to the patient during personal attendance.

6th. No written order is required for the "dispensing or distribution of any of the aforesaid drugs to a patient by a physician,

dentist or veterinary surgeon registered under the Act *in the course of his professional practice only.*" A record, however, is required to be kept of all such drugs so dispensed or distributed (except such as may be dispensed or distributed to a patient upon whom such physician, dentist or veterinary surgeon shall personally attend), and must show (a) the date such drug is dispensed or distributed, (b) the kind and quantity dispensed or distributed in each case, and (c) the name and residence of the patient to whom such drug was dispensed or distributed.

7th. *March 1st, 1915, take and keep an accurate inventory of every item on hand, containing any of the prohibited drugs.* No special form of inventory is required, but the inventory made must fully and clearly set forth the quantity of each kind of such drugs, preparations, or remedies on hand March 1st, 1915, and must be verified by oath not later than March 5th, 1915. *Physicians, dentists and veterinary surgeons are prohibited from furnishing such drugs to anyone except their bona-fide and personal patients.*

8th. Physicians, dentists and veterinary surgeons *cannot give orders for these drugs over the telephone, nor can they buy them in person except on an official form.*

9th. Physicians, dentists and veterinary surgeons must not allow any other person to use forms they have purchased.

10th. The Collector of Internal Revenue can require a sworn statement showing amount purchased, from whom, and the date for three months preceding the day of call.

11th. Violations of any provision of the Act is subject to a fine of not more than two thousand dollars, or imprisonment of not more than five years, or both.

12th. *Nothing in this Act repeals, or in any manner changes our State opium, morphine and cocaine law.*

AS IT APPLIES TO DRUGGISTS.

Your attention is called to the Federal Anti-Narcotic Law, better known as the Harrison Bill. In brief, this Act applies to druggists in the following manner:

1st. Every druggist who *produces, imports, manufactures, compounds, deals in, dispenses, distributes or gives away* opium or coca leaves or any compound, manufacture, salt, derivative or preparation thereof shall register with the Collector of Internal Revenue in the district in which he conducts his business by March 1st, 1915, and pay a special tax of One Dollar. The Government's Special Tax Year ends on June 30th, consequently on March 1st, 1915, Collectors will only accept the special tax for the four months, amounting to 34c. It will, therefore

be necessary to register on or before March 1st, 1915, and again July 1st, 1915.

2nd. Druggists cannot procure these drugs except upon an official form furnished by the Collector of Internal Revenue. *All orders must be made in duplicate, the original to accompany the order, the duplicate to be retained two years and is open to inspection to Federal, State and Municipal Authorities.*

3rd. Druggists can only sell to the public on the original prescription of a legally licensed physician, or dentist, or veterinary surgeon *who has registered* with the Collector of Internal Revenue under this Act. Said prescription must be in writing, be dated the day issued, bear the patient's name and address, be for a definite quantity, signed by the physician, dentist or veterinary surgeon who shall give his *full name, address and registry number.* Every prescription must comply with all of these requirements, and shall be preserved for two years from date filled and is open to inspection. *The druggist must know that the physician, dentist or veterinary surgeon has registered with the Collector of Internal Revenue.*

4th. For convenience, a separate file of all such prescriptions should be kept, but such prescriptions may be numbered consecutively with other prescriptions received, provided you keep a record showing (a) the file number given to such prescription, (b) the name of the person signing the prescription, (c) the *name of the person for whom such prescriptions* is filled.

5th. Druggists can only furnish these drugs to physicians, dentists and veterinary surgeons *for their personal practice or office use on official forms.*

6th. *No telephone or verbal orders permissible.*

7th. *March 1st, 1915, take and keep an accurate inventory of every item in stock containing any of the prohibited drugs.* Druggists are required to keep a correct record of all of the above drugs bought, the date, quantity, and from whom purchased. Remember you can only dispose of these drugs on an original prescription to the public, or on an official blank to a physician, dentist, or veterinary surgeon. Therefore, your records and stock on hand should balance with the amount bought and sold. No special form of inventory is required, but the inventory made must fully and clearly set forth the quantity of each kind of such drugs, preparations, or remedies on hand March 1st, 1915, and must be verified by oath not later than March 5th, 1915.

8th. The Collector of Internal Revenue can require a sworn statement, showing the amount purchased, from whom, and the date for three months preceding the day of call.

9th. Druggists are prohibited from allowing any other person to use forms they have purchased. Forms supplied at the rate of One Dollar per hundred, including original and duplicate. These forms are only to be obtained from the Collector of Internal Revenue for the district in which you have registered, and may be purchased in books of two sizes—either 10 or 50 blanks to the book.

10th. This list of registered physicians, dentists, and veterinary surgeons can be obtained from the Collector at the rate of One Dollar per hundred names.

11th. Exemption is made of preparations containing not more than 2 grains of opium, or 1-4 gr. of morphine, or 1-8 grain of heroin, or 1 gr. of codeine, or any salt or derivative to the ounce, or to liniments, ointments, or preparations for external use only for legitimate use, provided they contain no cocaine, alpha or beta eucaine, or any of their salts or any synthetic substitute for them.

12th. Violations of any provision of the Act is subject to a fine of not more than two thousand dollars, or imprisonment not to exceed five years, or both.

13th. *Nothing in this Act repeals, or in any manner changes our State opium, morphine and cocaine law.*

Pulmonary Syphilis.—G. D. Curver, San Francisco (Journal A. M. A., Jan. 23, 1915), describes a case of pulmonary syphilis which is of interest not only because of its rarity, but also because the patient had been treated for months for tuberculosis, the symptoms of which disappeared after an injection of 0.45 gm. of neosalvarsan intravenously, the night sweats disappearing, the cough lessening and the general feeling after the injection. This was followed up by intramuscular injections of gray oil (mercurial oil). As the patient left the city this was discontinued and a mixed treatment substituted until he could return. When he did return all the visible symptoms of syphilis were healed and the tuberculous symptoms had entirely disappeared. Culver thinks there must have been a miliary gummatous process with breaking down somewhere of the bronchi or deeper within the lungs to account for the hemorrhages, etc. The resemblance between pulmonary syphilis and pulmonary tuberculosis is generally recognized but authorities are not agreed as to the possibility of recognizing pulmonary syphilis by the physical signs. A positive Wassermann, however, justifies specific treatment. In any case of chronic pulmonary diseases with absence of tubercle bacilli, the various tuberculin reactions failing, and with the history and symptoms of syphilis, antiluetic treatment is warranted if only for diagnostic purposes.

ORIGINAL ARTICLES

THE RELATION OF PATHOLOGICAL CONDITIONS IN OTORHINOLOGY TO GENERAL MEDICINE AND SURGERY.*

By J. A. STUCKY, Lexington.

The above topic is not the one I gave to the Chairman of this Section when I was asked to prepare and present a paper for this meeting. This topic is chosen because it was impossible, on account of the war in Europe, to prepare an essay and have it up-to-date on "The Present Status of Major Surgery in Otorhinology and its Relation to General Medicine and Surgery." For many reasons I regret the necessity of changing my topic, and must give almost entirely my personal views on the topic chosen.

For some years past I have contended in medical journals and in private discussions that the relationship and dependence of the oto-rhinologist (and vice versa) to the internist, neurologist and general surgeon was not as close and intimate as it should be. Time, experience and closer observation have more deeply confirmed this view. The findings of eminent internists, surgeons, neurologists and pathologists in the last year or two have given new weight and strength to my own conclusions. Never was it truer, than to-day, that no special branch of medicine can be practiced independently. Every (so-called isolated and special) organ of the body, with all its organs and apparati. As oto-rhinologists are considered one of the most exclusive of specialists in medicine and surgery, we have never appreciated this fact as we should, nor do specialists in disease of other organs appreciate the oto-rhinologist as they should.

Few of us recognize as we should the value of and our dependence upon the bacteriologists, physico-chemist and dietitian, as well as upon the internists, neurologist and general surgeon.

To be known as a specialist in the practice of the science and art of medicine should carry with it far more respect and responsibility than it generally does, for it means that besides being a graduate and trained practitioner in the healing art, we are now devoting more time, energy and study to functional and organic diseases of certain special organs of the body, and as a result of this limitation of the field and concentration of our efforts in study and observation we are expected to have more skill and dexterity and greater accuracy

*Read in Section on Ophthalmology, Rhinology, Otology and Laryngology. Southern Medical Association, eighth annual meeting, Richmond, Va., November 9-12, 1914.

and success than does the one who does not thus limit and concentrate his efforts. Too much of late has been said and published on "needless mutilation," "massacre," and "slaughter" of tissue and organs not only in the field of the oto-rhinologist, but also in that of the abdominal surgeon. Especially has criticism and condemnation been cast upon those surgeons who have vigorously advocated the complete and radical removal of organs whose function is unknown or is supposed to have an interal secretion.

Such language, to say the least, is to be depreciated, and the wise medical man is careful not to use it, especially where there is a possibility or likelihood of the laity hearing of it. Any medical man who is ultra radical in all his work is as unwise as he is dangerous, so also is the ultra conservative practitioner. The safe and increasingly successful one is he who is conservatively radical. There is a marked difference between conservative radicalism and radical conservatism.

In the growth and development of our profession there may have been short periods of surgical and medical intemperance in the treatment of conditions and diseases requiring use of one or the other methods, but never have we been justified in resorting to language which conveys such impressions as "massacre," "slaughter" and "mutilation." The apology I offer for this digression from the topic of my paper is, that I may the more forcibly emphasize the intimate relation and inter-dependence one upon the other, of all the departments of the science and art of medicine and surgery.

Of late much has been written by such able internists as Billings and Rosenow, and such surgeons as Mayo, Murphy, etc., with reference to oral infectious foci, and there are now many morbid specimens in pathologic exhibits that show heart lesions and diseases of other organs, which collectively and individually tend to prove beyond a doubt that focal infections in the region of the cavities of the ear, nose, throat, mouth, teeth and tonsils may be the primary cause of serious pathological conditions not only in the joints, but in the abdominal viscera and organs of the thoracic cavity.

The importance of focal infections as a point of entrance of bacteria in general is well recognized, but the idea that the focus serves in addition as a place where bacteria can acquire new properties is not generally recognized and needs to be emphasized.

Under artificial tooth crowns and bridges, above and below the roots of dead teeth, there often exists bone cysts or other sources of pus formation. Any condition of the nasal cavities, naso-pharynx, pharynx or the alveolar process (pyorrhea pockets) resulting in puru-

lent or muco-purulent micro-organisms which may find its way into the gastro-intestinal tract through deglutition or into the blood by absorption through lymph channels almost invariably results in indicamurea. I have had a case of Ludwig's angina in an adult which recovered and one of edema of the glottis in an infant which was fatal, which directly or indirectly could be accountable for the existing auto-toxemia, septicemia and pyemia. With the aid of the Roentgen ray, electric trans-illumination lamp and other methods of determining actual conditions, assisted by the physico-chemist and bacteriologist, we should be able to report back to the internist, neurologist or surgeon who refers the case to us, complete and satisfactorily whether the cause of existing symptoms could positively or probably exist in that portion of the body to the diseases of which we give special attention.

It is well known that retention of secretions in nasal accessory sinuses, or any partially closed cavities, tends to become purulent, and cause systemic infection by being absorbed. Rosenow has proven that retention of bacteria may require new and deadly properties, as in sphenoidal, frontal and maxillary sinuses. Brem, in examining 300 bodies in the Colon Hospital, who died of various diseases of non-pneumococcal origin, found that in 14 per cent. pneumococci were present, and in 70 per cent of the cases dead from pneumococci, this sheds new light and gives increased evidence upon the sinister possibilities of nasal accessory sinus disease as a factor in infections of serious nature.

One important fact, often overlooked by careful and capable medical scientists is that the treatment of pathological conditions in oto-rhinology differs from that of any other portion of the body, in that these cavities, with their accessories, require constant ventilation as well as constant drainage, or the existing pathological conditions cannot be permanently eradicated.

A suppurative area in the field of oto-rhinology demands the same careful and thorough surgical treatment as it does anywhere else in the body, by a large exit by incision a thorough curettage if necessary, and perfect drainage maintained until all suppuration ceases and healing takes place. This can be done, but is more difficult because while we are maintaining drainage, we must not for any length of time interfere with ventilation. The medical profession as a whole is rapidly learning that the mastoid process and cells are to the cranial cavity what the appendix is to the abdominal cavity, and by early treatment of acute infection of the middle ear, by a free myringotomy, mastoid infection, suppuration and otitis meningitis is greatly lessened. The recognition of this by the intern-

ist and pediatricist, and the prompt relief given to the sufferer with earache, is rapidly reducing the number of cases requiring the mastoid operation.

The relation of pathological conditions in otology to general medicine is emphasized by the number of cases seen by internists, complaining of nothing but a general malaise, running a temperature curve not unlike that of typhoid fever, but having none of the pathognomonic symptoms or indications of the disease, there are none of the classical symptoms of mastoid suppuration, there is little if any change in the drum membrane, no pain or swelling back of the ear, the case runs a course of ten days or more, when suddenly the temperature shows a decided septic curve, the blood count shows not only an increase in leucocytes, but in polymorphonuclear percentage, later on classical symptoms of mastoid suppuration, meningeal irritation or sinus thrombosis appear. The otologist is called, the location of the septic foci determined and the operation reveals a thick cortex over the mastoid, and beneath which is an amazing destruction of bone, extending through the inner table of the skull, the sigmoid sinus uncovered and exposed a large extra-dural abscess is revealed; all of this without any symptoms of ear diseases. In the beginning deep pressure and percussion over the mastoid process, with transillumination of radiogram with daily differential blood count would have given evidence of the disease, and early surgical treatment brought speedy relief. This picture is one often seen by the otologist, and is not to be classed with the rare and atypical cases.

The internist or general practitioner who allows an appendix infection to pursue its course until rupture occurs, and the abdominal cavity becomes filled with septic material, is greatly chagrined over his failure to detect what was taking place in the abdomen, and humiliated by the delay and danger to his patient, in not urging surgical treatment earlier.

When the average general practitioner can as quickly and accurately diagnose acute middle ear, and mastoid infection, as he can those of the abdomen, and urges surgical help as quickly in one as the other, we will have fewer cases of permanently impaired hearing, and meningeal and lateral sinus infection.

Cases of chronic catarrhal otitis media, tinnitus, ankylosis of the ossicular chain and otosclerosis, cases that come first to the family physician, can only be successfully dealt with by the combined efforts of the internist and otologist, assisted by the physiological chemist and dietitian. In this class of cases, after the local obstruction and destructive causes are removed, faulty metabolism, as result of improper food, insufficient elimination and auto-

intoxication, whether from intestinal stasis or what not, must be removed. A few days on a restricted diet, an occasional analysis of the feces and urine, is of little service to the doctor and less to the patient.

In certain surgical cases, in order to obtain reliable aid from blood examinations daily or twice daily, differential blood counts must be accurately made, so in these cases in oto-rhinology which are due to or maintained by faulty metabolism, frequent laboratory examinations of both urine and feces must be made before we can prescribe a diet or drugs that will aid in arresting or curing the disease.

It is just here that oto-rhinologists, internists and neurologists often commit a grievous error by not going fully into the details of each case and assiduously following it up. It is not enough to push the case aside with the statement that the cause of the trouble is faulty metabolism (whatever that may be) and do nothing but give placebos, and promise nothing but to do the best you can, and urge the patient to be persistent and optimistic. I insist that it is a reproach to our science and art to admit that we do not know and cannot find the cause of any pathological condition that the human body has acquired, and I believe we will find and remove it when all of the special departments of medicine and surgery act in harmony and with determination. Faulty metabolism with the persistent co-operation of the patient can be made faultless.

We must remember that perfect metabolism requires proper functioning of every organ, and it is just as essential that the elimination of waste matter be properly accomplished as it is for the anabolic process to take place. Perfect function requires that every bodily organ be in a sound condition, otherwise imperfect combustion and retention of nitrogenized material is dangerous to that particular part of the body on which it exerts its influence. The blood, being the primary factor in the distribution of nutriment and oxygen to the tissues, is also the carrying agent of toxic material, and any new eliminated waste product will thus find its way to some particular organ of the body which will then manifest marked symptoms.

Cases are often referred to oto-rhinologists by internists, neurologists and surgeons, and we are expected to restore lost organs, and tissues and to rejuvenate those which have not undergone complete degenerative metamorphosis—all, acting together, aided by the physico-chemist and dietitian, may yet do more than arrest the progress or ameliorate the condition caused by a long suppurating ulceration from calcification of the drum membrane and ankylosis of the ossicles in inflammatory conditions involving the naso-

pharynx and extending into the Eustachian tubes causing impairment of its drainage and ventilation. In chronic pharyngitis of lithemic or gouty origin, which has brought about insidious changes along the Eustachian tube, causing irregularities and impediments to flow of air and the blood and lymph circulation, what can be done?

For these conditions much can be done, but the oto-rhinologist must either do the work of several departments of our science and art or have the hearty and interested co-operation of them all. Inflammation first cause congestion and increase of the connective tissue elements; then follows contraction, anemia, faulty nutrition, atrophy and degeneration.

Speedily remove the cause of the inflammation and there will be no sequelae. This can be done by the united help of the general and special medical men, aided by an educated and co-operative laity. The time limit of this paper forbids my discussing in detail any of the graver pathological conditions in otorhinology and their relation to general medicine and surgery.

In conclusion, I have seen cases of knee joint suppuration and other metastatic conditions resulting from an unrecognized suppuration in the ear, and nasal accessory sinuses. Also cases of pronounced mental depression and melancholia from involvement of the frontal lobe (the silent area) of the brain, due to infection passing through the cribiform plate and resulting in a pachymeningitis. In this age and this degree of perfection of the science and art of medicine the relation of one branch to the other, of one specialty to the whole, is one and inseparable. In every department we have received much and advanced far. To every one let us give as we have received and help the other to advance as far or farther than have we.

DISCUSSION.

H. H. Martin, Savannah:—I have listened with a great deal of pleasure to this paper. It seems to me the keynote of Dr. Stucky's paper is the relation between the so-called specialist and the general practitioner. I think we are all willing to admit that this relation should be much more intimate and much more strictly professional than it has been in the past. We are all familiar with the picture of the crying child with the earache and a high temperature. The specialist is called in, but unless he makes a very careful examination he will not find the cause of the condition. We are also familiar with a condition of rheumatic joints and apparently no tonsil inflammation. But on close examination we sometimes find a focal infection. There can be no question that a great many of the ills of children can be traced directly to focal infection in the throat or naso-pharynx. My own experience has been that

if a complete evacuation of the bowels does not relieve a child who is ill from no apparent cause, if you look in the throat you will find it. We should be radically conservative and conservatively radical. There can be no question that some of us in our enthusiasm do become a little bit too radical. But I contend that it is better to remove a healthy tonsil than to leave a diseased one. I think we will all admit that that horrible disease, cerebro-spinal meningitis, enters through the naso-pharynx. The fundamental principle of surgery is drainage, and when you have focal infections or retained pus, get rid of it.

The doctor spoke of the classical mastoid. There is no classical mastoid picture. You can only make a diagnosis in early mastoiditis by otoscopy to draw a classical picture until the case has advanced to extensive suppuration. In the early stages you can expect high temperature, but you do not always get it. I have seen severe cases with low temperature. You have got to examine the skin, you have got to examine the periosteum over the mastoid, you have got to let your finger go over the tip of the mastoid, you have got to make a blood count, and many things. Do not expect a classical picture. Neither do you get a classical picture in sinus infections. I think the greatest puzzle that I find in my daily practice is to try to find out whether or not patients have diseased sinuses. Of course, if a patient has got pus discharging from a sinus your office boy can make your diagnosis. But there are many conditions of the nasal accessory sinuses and of the vault of the pharynx that require the most careful examination, and you must not be content to say, "I have found a disease here;" you must be able in most cases to say to yourself when you get through, "I have found that there is no disease."

J. W. Jervey, Greenville, S. C.: Just one brief word, and that is that I think Dr. Stucky has presented a theme here which, while most of us who have heard it are more or less familiar with the actual conditions and occurrences, yet it seems to me that the important thing for us to do is to preach this gospel to the general practitioner. He is the man that has got to find out about it, got to learn to refer his cases to us when it is required. I know there are many cases, particularly in the country districts and the small town, where the men have not got all the facilities that the city man has, of death supposedly due to endocarditis, nephritis, typhoid fever and even malaria where the original causation of the symptoms would be found if looked for in the head, appendix, liver or somewhere else. It seems to me that the important lesson to be drawn is that the general practitioner as a class must be shown the importance of looking for these focal infections.

J. B. Greene, Asheville, N. C.: I want to emphasize just one thing, and that is the importance

of the teeth as a point of focal infection. In cases where the teeth have been worked and the nerve has been killed, it is easy to overlook an infection because the tooth is no longer sensitive. In such a case the X-ray is the only means of determining the existence of the trouble. The streptococcus viridens affects the heart, and the X-ray is the only way in which you can determine that infection of the teeth. There are also, of course, other infected conditions of the teeth and gums which may be points of focal infection.

J. A. Stuckey, (Closing): Dr. Martin certainly misunderstood me. My paper distinctly said, "the so-called classical symptoms of mastoiditis." I tried to put emphasis on the so-called." I fully agree with him about that.

Dr. Jervay has emphasized the point that I tried hardest to emphasize, and after my paper had been prepared I asked for the privilege of reading it before a joint session. I know otorhinologists do not need to hear such a paper, but the general practitioner does, especially the one who lives in the country districts and the small towns. You would be amazed at the number of cases that I see with mastoid and frontal sinus and alveolar trouble that could have been prevented simply because the general practitioner who got his start years ago, like some of us did, overlooked the local foci of infection and who neglected to use preventive measures early.

I am glad Dr. Greene called attention to the alveolar process. Dr. Billings called my attention to that several years ago, and up to that time I had not been noticing it. But now I have a radiograph made of every one of my cases where I suspect sinus trouble; indeed, it has almost become a routine to have a radiograph made.

Acute Necrosis of the Pancreas.—Jenekel reviews his experience with acute necrosis of the pancreas in nine cases, all men but three. The youngest was 28, the oldest 75. With one exception all were well nourished and inclined to corpulency. There was gall-stone trouble only in three of the cases. In three other cases the necrosis developed after a laparotomy. With severe clinical symptoms an operation is indicated without delay, but temporizing is justified if the symptoms are mild and the bowels move after one or two enemata, and the pulse keeps good and not much accelerated—when these conditions are encountered dietetic measures alone may bring relief. The cases reported demonstrate had occurred before and passed harmlessly over. Even a very severe form may spontaneously retrogress, as in one of his cases, but this is so rare it should not be counted on. Operative treatment can cure only when the toxic action has not been too severe and the further progress of the necrosis can be checked.

THERAPEUTIC RATIONALE.*

By B. J. O'CONNOR, Louisville.

An apology for such a broad subject as rational therapeutics, or therapeutic reasoning, may seem to be indicated, but your essayist believes that its consideration is both justifiable and necessary. Modern medicine, with its numerous ramifications and specializations, tends largely to make us overlook and forget our fundamentals and general principles; a superabundant literature is leading up into vicious circles, astray from the paths of truth, reason and practicability, and as a result we are overburdened with pseudo rather than true scientific therapeutics. The rapid progress of medicine and the still unsettled state of many of its problems has made such conditions to some extent natural or inevitable, but commercialism, avarice and popular ignorance continue and will continue to interfere most with our ability to obtain more definite therapeutic knowledge.

It is unfortunate that in no field of medicine is the ignorance of the average layman so great as in that of therapeutics, a field which though of greatest importance is overwhelmed with fads, fancies and fallacies on all sides. It is a science, which is dreadfully abused by the laity and almost equally so by no small number of our own profession.

The almighty dollar is possibly responsible for as many therapeutic irrationalisms and abuses as ignorance. Some new drug, some new combination of drugs, old formula with new names and dresses, are brought forth in devious ways with claims so extravagant that even our profession's power of reasoning is almost extinguished. But recently a supposedly reputable manufacturing concern in Ohio sent me and no doubt thousands of others a pamphlet, setting forth that "Lobotoxin" was "the" specific for diphtheria. It contained numerous testimonials from physicians. Without argument on the merits of such a wonderful therapeutic agent is it not a pity that our State Board of Health or the Federal Pure Food and Drug Commission is not empowered to do full justice to this and similar drugs, their purveyors and those of our profession who thoughtlessly, or for a consideration, subscribe their standing thereto. A certain amount of commercialism in the ranks of our own profession, such as financial interest in patent formulas, stock in proprietary concerns demands an equally strong condemnation.

As physicians we are permitting and fostering abuses in medicine and therapeutics that no modern business man would stand for a single moment. Too large a percentage of our therapeutic knowledge is gained from the

*Read before the Jefferson County Medical Society.

detail man, from our daily mail and from ways that commerce rather than science illumines. Our therapeutic science is more fictitious than real as it comes to us more from without than from within the profession. A standardization of drugs and therapeutic measures is as badly needed to-day as it is of surgery and surgeons. The splendid committee on Pharmacology and Therapeutics of the A. M. A. and the pharmacological experts of the U. S. Pharmacopeia and the National Formulary would welcome our encouragement, advice and co-operation in such a standardization. Why can we not become co-workers for ourselves and for true science rather than for others. Please do not construe this as a condemnation of the efforts of a familiar drug firm. The plan which they have inaugurated is good and commendable. Why, I ask, can not we as a profession have a clinical experimental commission with a disinterested and true scientific power? We need just as careful clinical observations as we do laboratory studies and animal experiments.

Dismissing with this superficial consideration the many foreign obstacles to scientific therapeutics let us glance over our personal stumbling blocks. Can we ever hope to analyze rationally our therapeutic results without more definite observations? How many of us record in writing anything like a history of our patients? How many are there who even keep a copy of their prescriptions or a line on other measures of treatment advised? When we come to discuss and report our therapeutic profits and losses we rely solely on a memory which is sorely overcrowded and easily misguided by an active imagination. As a result our impressions are so vague that they are almost worthless. A few weeks ago, for example, this society heard a spirited discussion of the treatment of increased arterial tension, in which many contradictory opinions appeared. Let us presume that for a period of one year that every member of this society would record on a uniform history sheet the important details of his observations on all the patients presenting such a symptom who came under his care, and that we then discussed again the subject. Would it not be reasonable to conclude then, that if the various observers would carefully study their results, compare them with those of their associates and judiciously weigh the individual peculiarities of given cases and the variations of opinion, that we could attain more uniform, more definite and more valuable data and that we could have something like a consensus or agreed majority decision.

In interpreting our therapeutic results

from certain forms of treatment, from the gamut of a simple drug to a major surgical operation, are we not ever too shortsighted in our views and too forgetful of the great *vis medicatrix naturae*? Don't we overlook the radical change of habit, the alterations of the physical and mental surroundings and many other natural agencies which our treatment entails, or possibly should entail but frequently does not. Take for example an uncompensated valvular lesion. You order digitalis and appropriate medicines for the other manifestations connected with the faulty circulation? Do you ever think of what the absolute rest in bed will do or is doing? Do you think of the dietetic changes which the patient himself finds necessary or that you order? Do you think of the effect of bathing, of local applications, of massage? Do you realize the great psychic influence of the altered habits, of your personality, of your assurance and knowledge? As another example consider a convalescent or anaemic patient. We give or have given a specific drug for the cause—diphtheria, malaria, syphilis, hookworm disease, etc.—or Nature through an elaborate process brings about a cure by immunization. To hasten and fix the recovery we prescribe tonics, we send our patients to the country, and the patient does a host of things, some with and some without our connivance. If we have incidentally prescribed a good peptomanganate, a wise glycerophosphate or a fair enzyme, do we not, with scarcely an exception, credit our patients recovery to it, rather than to the food, rest, and other factors concerned? Do we not encourage our patients in the same belief by ordering another bottle of the same dope?

In this connection it might be well to recall some of the wonderful results secured by Homeopathic dilutions, by Christian Science and allied methods of treatment. Their greatest curative value is beyond doubt embraced under a very striking therapeutic adage, which I recently found in an old work on therapeutics—*primum ne noccas*—first, lest thou do harm. As allopaths, advocates of various and sundry drug combinations, as tools for various medicine manufacturers, I am afraid that this splendid motto should be ever fresh in our mind when we are attending the sick, first, lest we do harm with our drugs, our wisdom, or our scalpels. Under given conditions many of our most valuable drugs are highly poisonous or deleterious, even in the dosage as officially stated. In combination with other drugs equally active at certain ages and pathological states they occasionally do great harm. Twilight sleep, the preliminary anaesthetic opiate, vaccine therapy, salvarsan therapy and similar examples

might be noted, not to be entirely condemned, but simply cited as instances requiring unusual judgment, discretion, experience and knowledge. The death-knell of shot-gun prescriptions should have been sounded years ago, but if you spend about five or ten minutes over the prescription files of any druggist you find enough to almost hang your head with shame. Add to this the quantities of active poisonous drugs handed over the counter, or called for, on the active advice of rank lying advertisements, or that of well-meaning but ignorant friends and you will begin to realize that great and untold harm is being done, that the undertakers and death returns are raking in an early premature harvest.

As a rational therapist we must consider almost anything and everything tending towards the alleviation and cure of disease, not only the disease of abnormal condition, actually present, but also the complications, sequelae and the possibilities of others acquiring the same trouble. "Prevention is greater than cure" and, let us add, it is easier. The modern physician who is recreant or careless in this respect is not a rational therapist. In the application of preventive measures we find the most essential reason for the abolition of all forms of quackery and self-medication. The laity do not realize and hence can not appreciate the tremendous possibilities open to a well-educated competent physician. We have to-day an immense amount of preventive knowledge but do we utilize or apply it? Not the intricate, elaborate and costly methods of prevention but the simple rational and easy applicable forms? Would not the science of medicine and therapeutics undergo a radically and universally beneficial change if we, as physicians, were paid by our clientele to keep them well rather than to cure them when afflicted. A good working acquaintance of the various branches of preventive medicine and its ready employment, is in our day, a *sine qua non* to rational therapy.

Intimately associated with preventative knowledge and of equal importance in rational therapy is a complete understanding of the etiology of disease. How can any form of treatment be rational or scientific unless the cause and contributing factors of the disease be known? Yet how prone we are in attending the sick to get to our prescription blanks or our drug shelves, and completely slight all the probable factors which brought about the disease and overlook the existing conditions which aggravates it and causes its continuance, when their removal or abeyance would probably do more good than all the medicines that exist. If you realize the importance of etiology and pathogenesis in rational therapy,

you must acknowledge that in the past we have given it but little attention. Look up your text-books on Therapy, glance over your magazines on treatment and see how many authors devote a third as much space to a discussion of this matter as they do to drugs. Ask any physician how he would treat a given disease and you find that he will almost invariably start and finish on drugs alone. With a little more attention to etiology and pathogenesis we will find ourselves giving more appropriate advice in the regulation of our patients' habits of life, the amount and kind of food, drink, clothing, exposures, associations, habitats, etc., advice that would in numerous instances accomplish considerably more than would drugs.

We forget, too often, that mechanical, occupational, environmental and reflex causes are either the only factors, or at least, the predominant causes of numerous symptoms and disorders. Take for example the flat-foot strain in the so-called rheumatism of the lower extremities, the sacro-iliac strain in the so-called sciaticas, the backaches from faulty carriage or prolonged malposition; the appendix, the gall-bladder, the tubercular focus, the damaged kidney, the eyestrain in stomachic disorders and indigestion; the faulty living and dressing habits in dysmenorrhea, and so forth, almost *ad infinitum*. Rational therapy demands that the objective findings rather than the subjective complaints of our patients be our main guide; yet how many of us give our patients anything but a partial and superficial examination. It ought to be needless to say that in addition to a patient's history, elaborated by skilful questioning, that a thorough physical examination and other studies of his condition, is of more importance from a therapeutic standpoint than is a good knowledge of a thousand drugs.

Even when we do spend sufficient time to make an accurate diagnosis are we not too inclined to treat the disease too much by its name rather than the conditions actually present in the given case. Take pneumonia, typhoid, tuberculosis, diabetes and the numerous diseases for which we have no real specific therapy. The various forms and stages of such diseases, the peculiar conditions and surroundings of the different individuals afflicted, must be duly considered as we may otherwise employ therapeutic measures for giving diseases which might benefit some but work untold harm to others.

To be rational and practical therapists we must give more attention to details—details of our patient's condition, his peculiarities and idiosyncracies—details of our measures of treatment as to time, duration, frequency, method or technique. Nothing is

more significant to the finesse and success of any occupation or trade than the due attention to details. Our most valuable medical treatises and works are those which do not slight the little things, those that set forth the subject clearly, fully, duly balanced and properly lighted. To-day we rush into print with hazy observations, active imaginations and frequent faulty conclusions. Someone puts forward a certain method or means of treatment, others follow pell-mell, still others arise and condemn off-hand, and so the pendulum swings until it rests, fortunately, usually a little ahead of where it started. Would that more of our modern writers, were like the great Pasteur, of whom it has been said, that he never made a statement unless it was true, because he could not only satisfy his own scientific reasoning but could also prove the matters for others.

General medicine and therapeutics to-day presents as many scientific certainties to the close and observant student as does surgery, which latter, is, after all, nothing but a better paid branch of therapeutics.

Despite the wonderful advances in our science contributed by surgery, by animal experimentations, by physiological, psychological, biological, bacteriological and chemical discoveries and by the positive demonstrations, we still have a vast unsettled and uncultivated field of ailments and diseases—a contemplation of which almost overwhelms us in our lack of resources and our need of unending study. Rational therapy to-day offers nothing for the indolent or laggard. Although the medical profession as a whole is an honest, conscientious and intelligent body, we find in its ranks too many easy-going, non-studious and unscientific men, who are easily misled and at times equally misleading. Is it any wonder then that we fail to relieve many of our patients, or why we see them drifting to others, the homeopath, the osteopath, the vitapath, the nature healer, the a-Christian un-Scientist, the quack or the undertaker. Naturally not a few of our patients are lost through their own ignorance but do we not lose as many by our own lack of study, and common sense, our carelessness and failure to appreciate the enormous strides that rational and scientific therapy has brought forth in the past few decades.

DISCUSSION.

W. F. Boggess: This is a splendid paper, by a most capable doctor, one who thinks rationally and scientifically. There is no subject that appeals to us more than the one Dr. O'Connor has chosen. There is need of our stopping to consider whether we are drifting therapeutically. If I were to offer a criticism of modern medical teaching, it would be the apparent neglect of the

subject of therapeutics. I think our medical schools are committing a grave error in not devoting more time to the study of the scientific application of therapeutic measures. The day for empiricism in medicine is passed, so far as the internist is concerned. While the brilliant achievements in surgery justly excited the enthusiasm of our profession, we must not overlook the fact that advances along the line of therapeutics, while possibly less spectacular, have been quite as remarkable as those in surgery. The laboratory men and skilled therapeutists are now giving us facts for our guidance, and to-day there is no excuse for practicing medicine empirically. We should all be familiar with the therapeutic action of drugs and be able to apply them to suit the pathogenesis of the condition we are treating. However, the physician who trusts to drugs alone for the cure of disease and alleviation of pain and suffering is going to be a failure; he should be able to bring into play hydrotherapy, electrotherapy, massage, suggestive therapeutics. These all belong in the therapeutic armamentarium of the physician of to-day, and they should be employed, not merely as impressive equipment to aid him in extracting gold from his patients, but scientifically, in conditions where they are indicated.

Not long ago one of my patients who had been suffering for some time with terrific headaches and stomach trouble, consulted a prominent eye specialist of this city. His conclusion was that while she had some little trouble, it was not sufficient to justify the use of glasses. My own opinion was that the eyes were responsible for her trouble and I sent her back to him, and again he stated that she did not need glasses. A few weeks later she fell into the hands of an optician who corrected her refractive error, and since that time she has not suffered from headache or stomach trouble. Upon acquainting the specialist with this fact, he remarked that it must have been the psychological effect. I said, "Doctor, if I can satisfy my patients by putting martin-gales on them, I am going to do it." Oftentimes, we minimize the real trouble and look elsewhere for the cause.

Internists, as a rule, do not give the scientific application of therapeutics the study it deserves. We are apt to get in the habit of using a few drugs—some of them not because we know what to expect from them, but because some drug concern tells us they will do this or that, without any scientific basis for the assertion. I frequently make use of proprietary preparations, but I do so only when I know that they have in them the drugs needed in the treatment of the particular case, and, as a rule, they are put up better than the average druggist could compound them. It simply resolves itself into a question of knowing your pathogenesis and knowing the therapeutic indications, and then applying the proper therapeutic measures.

M. L. Ravitch: If I had copyrighted the paper I read before the A. M. A. at Minneapolis two years ago, I would have been in position to sue Dr. O'Connor for infringement. He appropriated my sentiments, but I am glad of it.

I do not believe that there is any such thing as rational therapeutics. I do not believe that there should be any distinction between the pathies. Dr. O'Connor's reference to the homeopath and the osteopath should also have included the allopath. What do we members of any "path" know about therapeutics? No drug can be effective until we exhibit its full physiological action. How are we to give drugs if not for their physiological effects? Take morphine. Who would think of giving 1-100 grain of morphine to relieve pain. We give 1-4 grain, or sometimes 1-2 grain. Is it not ridiculous to give any drug in smallest possible doses for a long time and expect any result? How and why do we give drugs for ailments the etiology of which is absolutely unknown to us. Do we know anything about internal secretions? Don't we do guess work? Are we not always ready to take up any proprietary medicine for the imaginary good it may do? Do you call that rational therapeutics? Dr. O'Connor mentioned diabetes. What do we know about diabetes? Practically nothing, and yet we are always ready to administer medicines, vaccines and serums. Therefore, on the whole, I do not see that our so-called rational therapeutics are any more rational than those of the homeopath or the osteopath or even the Christian Scientist. We will then only be able to lay claim to rational therapeutics when we have learned the real cause of the disease, the process of internal secretion and other reliable diagnostic agencies.

J. Rowan Morrison: I have enjoyed Dr. O'Connor's splendid paper very much indeed.

I am still a firm believer in castor oil. The majority of patients who come to the physician are firm in the conviction that there is some remedy, if they can only find it, that will cure any ailment from which they happen to be suffering. In times past, and even in the present day to a certain extent, physicians are prone to foster and encourage this belief on the part of their patients, but I think the sooner this idea is dispelled, the better it will be for all.

I thoroughly disagree with Dr. Ravitch in his statement that there is no such thing as rational therapeutics. He said we do not know anything about diabetes, and there I disagree with him again. We know that if we can make the diabetic sugar-free, we can relieve his pain and improve his condition generally. If this is not rational therapeutics, then I do not know what the words mean. I think the main trouble is that we are too prone to fall in with the patient's idea that we may be able to find some drug, somewhere, that will effect a cure.

C. H. Harris: I once knew a very successful doctor, who practiced for a long time in this

city, who included only three prescriptions in his armamentarium, no matter what condition he happened to be treating. They were pulvis rhei., sulphate of quinine, and calomel. When I was in the drug business we used to make those capsules by the hundred, and keep them on hand, and to fill one of his prescriptions it was only necessary to count out the number ordered and write the directions.

I remember an amusing incident illustrating the effect of medicine. The laundress at our house, a large fat negro woman with a hearty appetite, who had the constant idea that she needed medicine. In my office I had a little box into which I put all the samples of various preparations that I received except the poisonous ones which were kept in another box. This darkey came to my office one night and said that she was very sick and needed medicine. According to her, she had headache, blindness, dizziness, dyspnea, pain in the belly, nausea, heart trouble, and, in fact, everything I could suggest. I shut my eyes and reached down into the box I mentioned, extracted a bottle and told her to take a teaspoonful three times a day. The next day she came back and said that medicine had done her more good than anything I had ever given her. I asked her to let me see it, and she accordingly brought the bottle to me. It was a bottle of furniture polish.

I do not know enough about drugs to decry them, but I am always leery of the man who brings a pill that is good for everything from hydrophobia up. I believe that castor oil, or calomel, pulvis rhei., and sulphate of quinine, is very good medicine.

F. C. Askenstedt: I must commend Dr. O'Connor on his excellent paper.

The essayist's appeal is for rationalism in medicine. I believe that, too often, we are careless in prescribing. We give a certain drug because so-and-so has told us that it is good. However, it may work in one case and not in another.

One point in which I especially agree with the essayist is in respect to keeping records. If one desires to be a scientific physician, one must keep records.

Medicine will never become an accurate science until therapeutic principles are fully recognized. Physiology is governed by biological principles; pathology has its underlying principles; and why should not therapeutics likewise have its basic principles? One that is foremost in the attention of the profession to-day is the law of reaction. Weigert announced, a long time ago, that to an irritant the system reacts in excess of the force necessary to remove or overcome the irritation. If the system is exhausted, of course this does not apply, but ordinarily, it will react not only sufficiently to eliminate the irritation, but in excess of that. Rudolph Arndt, of Germany, is credited with the discovery of what he

calls a "biologisches grundgesetz"—biological fundamental law—viz., that while a pronounced irritation will hamper or destroy function, a much smaller degree of the same irritation will produce a stimulation. This law possesses therapeutic value. This is well-known in the application of bacterial products, and Ehrlich has shown that it extends also to the higher plants, inasmuch as he made his observations regarding the production of antitoxins in experiments with abirin, a product of the jequerity plant, and with ricin, from the castor oil plant. We know that when an individual begins the use of tobacco, it affects him badly at first, but after a while the system becomes accustomed to it—antibodies are produced, and he can consume large quantities of it without apparent harm. We find that the same applies to agents of mineral origin, as, for instance, arsenic. I see no reason why we should not recognize the general application of this law of reaction in medicine—the lay that "like cures like." Hydrotherapy, vibration, and electrotherapy are largely based on it. Something has been said about the "homeopathic dose." We can readily understand that, if we give a drug, the action of which is similar to that of the disease, in doses sufficient to get the physiological effect, we only make the patient worse. What we want is the reactive, not the physiological, effect. You may remember that, in 1901, when Koch began the use of tuberculin, he gave it in very large and frequent doses, and the results were not favorable. Recently much better results have been obtained from the use of tuberculin in small doses given at intervals of about ten days. This therapeutic action is said to be specific, but bacteriology does not recognize such a notion as absolute specificity, for the action of agglutination and precipitins teaches us that there is a lateral extension of reaction, though proportionately less pronounced, attacking substances closely allies in action to the antigen.

I believe we all agree that mental myopia within the medical profession should not be tolerated. A physician should be sufficiently broad minded to recognize the good, from whatever source it comes. This is my attitude. There is some good in osteopathy, in Christian Science, in electricity, in hydrotherapy. There must be some therapeutic principle underlying them all, which we should be broadminded enough to recognize and make proper use of.

Leon L. Solomon: In this excellent paper, to-night, we have had a veritable "Sermon on the Mount." It appears to me that Dr. O'Connor's essay may lead to the inference, that the "therapeutics of to-day" is irrational and not justified. As one of the speakers has pointed out, there is always a tendency on the part of the laity to believe, that the road to health lies entirely through a drug store,—and that there is a remedy somewhere, in some apothecary shop, which will cure any trouble, if it can only be found. The

result is that we may, at times, be forced to prescribe medicines, which our better judgment tells us are not actually needed. It would be a mistake to assume, that the essayist is a therapeutic nihilist; he is simply making a plea, in his own positive and erudite way, for "rationalism in therapeutics." I previously taught this subject in a medical school, for a number of years, and it is my own belief, that the therapist of to-day is much more rational, than it was, five years ago. Fewer doctors and certainly fewer teachers are to be found, who recommend the use of many drugs, in an acute disease, or many drugs in any disease. Naturally, progress along this line has been slow. We are harassed, on all sides, by literature, coming from men in this country and abroad, recommending this or that agent, and, as soon as the agent in question has been proven to be of little or no value, we are apt to get the "neo" of that article. Dr. Yandell used to say, that there were only four things, that therapeutics could do—"puke the individual, purge him, stimulate him or depress him," and I am sometimes almost ready to agree with him, that this is the most that even remedies of to-day can do.

Only this evening a school-teacher came to my office complaining of nervousness to the extent, that she was unable to properly discharge her duties. This woman expected me to give her "some medicine or tonic" as she put it, which would so improve her condition, as to force her to do her work. She did not need an iron tonic, or indeed any tonic. I had already examined her blood; it was not deficient in corpuscular elements or in haemoglobin. She is simply tired; her nervousness is the result of the tax upon her brain, combined with insufficient food, poor food, poorly cooked food, insufficient time afforded to eat her food and lack of sufficient body rest, and this very frequently is true of other patients who present at the doctor's office for treatment.

That part of the essayist's paper, which advocates the keeping of records, particularly appeals to me. Before I began keeping records, oftentimes, within three hours, after writing a prescription, I would forget what it contained, except in a general way. I believe every physician should keep a record of every prescription he writes, and his reasons for writing it, briefly recording symptoms and signs as they are revealed and laid bare.

We are giving too many drugs and we burden the patient whenever there are many prescriptions, containing drugs, which, in some instances, may be antagonistic, chemically or physiologically or both. A moment ago, I turned to a gentleman, sitting near me, who is a teacher of therapeutics, and asked him if he would recommend the administration of digitalin, and I was very glad to hear him say, that he thought it wholly worthless, and he had abandoned its use, some years ago. And yet this is a drug which is used

almost daily by some of the best in the profession. In hospitals, abroad, I have seen it given up to 5 grain doses, with absolutely no results.

As to the question of dosage in medicine: We are constantly giving our patients too much of certain remedies, particularly of iron. I see physicians giving tablespoonful doses of Bascham's mixture, more correctly called, liquor ferri et ammonii acetatis. I sometimes think that our patients are more disturbed by being compelled to deal with and eliminate certain drugs, than they are disturbed by the disease condition, for which the drug was intended.

I was also impressed by another aspect of Dr. O'Connor's paper. I was very glad to hear him make the statement, that it is an error to give all the credit for an apparent cure to some last therapeutic measure, which we have employed. It is a more or less natural tendency to ascribe the cure to the last measure employed, which, often enough, has played little or no part in the modification of the ailment.

On the whole, it appears to me that the application of therapeutics to-day is more rational, than it was a few years ago, and that it is becoming more rational every day.

Virgil E. Simpson: In many respects this paper is one which seems to have been written after my own heart. For a number of years I have been trying, in my limited way and with what influence I may have had, to instill into my associates a clear conception of what drugs can and cannot do. As the result of that effort, I have been dubbed a "therapeutic nihilist." Only recently I read a paper, before one of our local medical societies, with respect to some of the fallacies of therapeutics, which meet with a somewhat similar reception.

There are several things that lie at the bottom of our present trouble. In the first place, we are prone to forget that the natural tendency of the human system is toward recovery from disease. All acute conditions tend to recover. In the next place, we forget that drugs do not cure disease; that whatever the doctor may do in a therapeutic way (I am using the term therapeutic here in its broadest sense) is merely an aid to Nature in its efforts toward the restoration of health. It makes no difference whether this therapeutic measure be a drug or some mechanical appliance, as a splint applied to a broken leg, we are simply aiding Nature in her effort to re-establish normal processes.

Another phase of the subject that has been referred to is the use of so-called proprietary remedies. It has always been amusing to me, to hear men stand up in these experience meetings of medical societies—county, state and national associations alike—and abuse proprietary remedies and talk about how they prescribe drugs and administer them rationally, with due respect to their pharmacological and physiological functions, knowing that these same men will, upon

returning to their respective duties, continue the free use of the proprietary medicines that they have so roundly abused. We will never have rationalism in therapeutics so long as the prescribing of trade names is continued. The man who undertake to remember all these trade names (and some of them are almost unpronounceable) and to remember, not only the ingredients contained in each particular preparation, but the proportions of those ingredients, and in addition, and what is most important, to remember what these drugs are supposed to do, is undertaking a Herculean task. I find it almost impossible to carry in my mind the things I absolutely have to know. Therefore, why should I clutter up my brain with trade names, and undertake to remember what is contained in this or that firm's particular combination? Why should I run the risk of brain fog resulting from such effort, when I can more readily carry the drugs, as such, in my mind and make combinations at the bedside to suit the individual condition?

There are so many angles to this subject that I wish it were seven o'clock instead of ten.

Bernard J. O'Connor, (Closing): The hour is so late that I will not attempt to discuss many of the points that have been brought out. I agree with the majority of the speakers in practically everything that has been said.

The remarks made in the paper were not intended to be disparaging to Dr. Askenstedt or any of his homeopathic associates. I have as much respect for the homeopath as for the allopath; in fact, I occasionally find myself using a little homeopathy. There are many things in all schools that are open to criticism and, no doubt, I am just as susceptible to criticism as are the vast majority of us.

Forward Dislocation of the Clavicle.—Braatz found that the dislocation recurred after reduction when the shoulder was drawn backward in the case reported. To prevent this, he bandaged the shoulder, pushing it forward and holding it in this pushed-over position with a hard pad of cotton at the back of the joint, held in place with strips of adhesive plaster and other bandages to keep the shoulder thus pushed forward. The clavicle and shoulder were kept immobilized in this way for two months and conditions have persisted normal since. This answers the purpose as well as Danielsen's method (described recently in the *Journal A. M. A.*, Nov. 21, 1914, p. 1827), while it is far less inconvenient.

Pathogenesis of Bone Cysts.—Bolognesi reports entirely negative results from his experimental research on the origin of bone cysts. Neither with trauma nor with an infectious process was he able to induce the formation of a bone cyst.

ECTOPIC GESTATION.*

By HARRY J. PHILLIPS, Louisville.

It is the purpose of this paper to present ectopic gestation as one sees it at the bedside. After the surgeon has opened the abdomen and removed the gestation sac, it is very interesting to know whether it was a tubal rupture or a tubal abortion, and whether it occurred between the layers of the broad ligament, or into the general peritoneal cavity; but such questions are at the best only surmises. They in no way influence the treatment, and cannot be more than suspected until the abdomen is opened.

Writing upon this interesting subject from experience obtained at the bedside, I would say that cases of ectopic pregnancy may be placed, according to the clinical picture presented by the patient, into four groups:

(1). The woman is seized suddenly with severe abdominal pain and rapidly passes into a condition of profound collapse:

(2). The woman suffers for some time from occasional faintings, pain and uneasiness over the abdomen, and a bloody discharge from the vagina.

(3). The pregnancy advances without interruption to the later weeks or even full term:

(4). The pouch of Douglas is filled with an enormous blood clot (pelvic hematocoele):

Group two contains the cases which are the most numerous and consequently the most important; they may be overlooked until they pass into group one, or rarely into group three; group four is always the sequence of group one or two.

(1). The woman is suddenly seized with severe abdominal pain and rapidly passes into a condition of profound collapse: Fortunately this type of acute rupture of the tube is rare. When it does occur the ovum is usually situated in the isthmus of the tube, although it may even occur in the ampulla. Questioning the patient may or may not elicit the history of a menstrual period missed. It all depends upon the age of the pregnancy, and what gynecologists term the "malignancy of the ovum!" There are no premonitory attacks of pain or bloody vaginal discharge. The woman may be perfectly well, engaged perhaps in her household duties, and is suddenly seized with abdominal pain, the feeling of something giving way and then collapses. When the internal hemorrhage is profuse, all the symptoms of collapse may rapidly supervene. Dizziness, yawning, languor are quickly followed by the breaking out of a cold, clammy perspiration, fainting, blanching of the cheeks, and a rapid, thready pulse. The

temperature is usually normal or subnormal, although Noble has reported a case of febrile temperature during the period of collapse, which demonstrates that a rise of temperature immediately after collapse does not exclude hemorrhage from the diagnosis. The following is a report of a case of this type:

Mrs. R., mother of three children, was seized with terrific pains in the abdomen, which she thought was due to indigestion, and after being helped to the bed she fainted. I was immediately sent for. Upon my arrival twenty-five minutes later I found the patient conscious, very pale, and with a small, thready pulse of about 145. Appreciating fully that the patient was in great danger, I called in a surgeon. When we questioned the patient we learned that there had been no previous illness but she had missed one menstrual period. The abdomen was opened as soon as preparations could be made at the infirmary. The nature of the trouble was at once apparent,—early rupture of a tubal pregnancy. After removal the tube was found to be ruptured in the isthmus.

The history of the case and the appearance of the patient are so striking that there should never be any difficulty in making the diagnosis. One must be guided largely by the condition of the patient, for in these cases of early tubal rupture nothing can be felt upon bimanual examination. The ruptured tube is soft and collapsed, and the blood which has poured out into the abdominal cavity has not had time to collect in the pouch of Douglas.

In arriving at a diagnosis of this type of "acute tubal rupture," we may be called upon to differentiate between this condition and (a) torsion of the pedicle of an ovarian cyst, (b) rupture of an ulcer of the stomach or duodenum, (c) a gangrenous appendicitis. In none of these conditions, however, does the patient present shock and collapse so pronounced and so rapid. To be sure there may be faintings which blanch the face and quicken the pulse, but when these pass away there is temporary improvement followed later by abdominal symptoms.

The similarity between sudden rupture of the tube and torsion of the pedicle of an ovarian cyst may be marked, if the severe abdominal pain be associated with a hemorrhagic vaginal discharge. In the case of a perforating gastric ulcer, the history of the case and examination of the patient direct one's attention to the gastric region. Also in cases of appendicitis there are always pain, tenderness and rigidity over the region of the appendix. We must also bear in mind that ruptured duodenal ulcer may be confused with appendicitis, because of pain referred to the appendicular region. There is no danger of this type of case being overlooked; the woman

*Read before the Jefferson County Medical Society.

is desperately ill from the onset, and surgical intervention is imperative.

Sometimes mistakes in diagnosis may be made by the surgeon, because he will usually explore the region of the stomach first as he most frequently meets with these cases there; but no time will be lost if he examine the appendix first of all, because he will find the effusion of blood whenever he passes the examining fingers downward toward the pelvis.

(a) The woman suffers for some time from occasional faintings, pain and uneasiness over the abdomen, and a bloody discharge from the vagina: This type is by far the most common, and is the type that gives the medical practitioner much concern, both regarding diagnosis and treatment. This type always presents premonitory symptoms for sometime before the severe collapse. It is of the greatest importance that the physician understand this, and remember that women with ectopic pregnancy are not as a rule struck down suddenly, but that they have pains, faintings, bloody discharge usually of so severe a character as to cause them to seek medical aid. It seems to me that this is not fully appreciated by the medical profession. Most physicians, when they think of extra-uterine pregnancy, picture the women struck down suddenly without warning. Certainly such cases do occur, but they are the exceptions. When they do occur, however, they are readily recognized, for the extreme collapse is apparent; but for the full understanding and treatment of the group we are now considering, a knowledge of the condition and careful judgment are necessary. In this group of cases the clinical history is of the very first importance. Indeed, I know of no disease in which a careful consideration of the history is more important than in ectopic gestation. Let me report two cases of this group:

On August 25, 1915, I was called to see Mrs. B., found her pale, restless, pulse 130; she complained of pain in lower part of abdomen. Examination showed a mass or swelling in lower part of abdomen. On bimanual examination Douglas' pouch was found filled with hematocele. Patient suffered considerable pain. Diagnosis, ruptured ectopic pregnancy. The patient gave the following history: she is 31 years old, has had three children, the youngest of whom is four years old. Had menstruated last on July 15. On August 12th was seized with violent cramps that she thought were colic. This passed away, but the attack returned ten days later,—August 22nd. A bloody discharge first appeared on August 25th, the day I was called. Abdominal section was performed, and a ruptured right tube was removed, also a large quantity of clotted blood. This patient had

lost considerable blood, and came off the table in bad condition, but under stimulation and transfusion she recovered.

Case II. Mrs. W., had recently been married. She should have menstruated June 3rd, but her period did not begin until June 19th, about sixteen days delayed. She then began to menstruate. On June 24th, while still menstruating, she was seized with cutting pains over the lower abdomen. I was called. Found her with anxious countenance, suffering pain, pulse 90. I prescribed a medicine to allay the pain and saw her next day. She was no better. On the third day a swelling appeared in left lower abdominal region, which extended as high as the umbilicus. This mass could be felt through the vagina, and was believed to be to the left of the uterus. The hemorrhagic vaginal discharge continued; mass slightly increased, and soreness and pain continued. On July 3rd I called a surgeon who concurred in my diagnosis of extra-uterine pregnancy. Patient refused operation. On June 30th, fever made its appearance, and since that time she has had a morning temperature of 100 degrees and evening temperature of 101 degrees, with a pulse as rapid as 120 on the day the surgeon saw her. July 6th she began to improve, and temperature, pain, and pulse began to improve. Treatment consisted of hot applications over abdomen. Opiates from one to four doses in each 24 hours. Salines for bowels, light diet, saline vaginal douches, syrup iodide of iron. This patient was confined to her bed ten weeks, at the end of which time she was improved sufficiently to sit up.

The symptoms, then, to be considered are amenorrhea, recurrent attacks of abdominal pain, uneasiness, hemorrhagic vaginal discharge, and feelings of faintness. The pain is caused by intramural hemorrhages which are constantly occurring. It is also due to a colic in the tube and sometimes in the uterus. Later, when blood has been effused into the peritoneal cavity, the pain is due in part to irritation of the peritoneum. Abdominal pain is of great importance. It is a symptom that should always attract attention. In ectopic gestation it is generally situated low down in the abdomen and very often is more marked on one side. Amenorrhea is usually present in cases of this group, although the pain and uneasiness may come on before there is time for a menstrual period to be missed. Naturally, amenorrhea is a symptom of very great importance, for it at once directs the attention of the physician to pregnancy, and in association with abdominal pain, to some complication of pregnancy. The presence or absence of the ordinary subjective and objective signs of pregnancy, such as morning sick-

ness, pain in the breasts, and other mammary changes, cannot be relied upon in ectopic pregnancy in the early months. Of course if they are present they confirm the diagnosis; but they are very often absent, and indeed appear to be less constant in extra-uterine than in intra-uterine gestation. Irritation of the bladder is a common symptom, especially if there is a collection of blood, or hematocoele, in Douglas' pouch pushing the uterus forward against the bladder.

Diagnosis before rupture: (1) the patient is within the child-bearing age; statistics show that the largest number of extra-uterine pregnancies occur between the ages of 25 and 35 years; (b) the patient may have been childless, but more often she has had one or more children; (c) quite frequently a history pointing to some inflammatory condition of the uterus and its appendages may be obtained; (d) one or more menstrual periods have been missed; this, however, is not constant, depending on the age of the pregnancy; (e) bloody vaginal flow, usually moderate in amount and dark in color; but sometimes free or even profuse with bright red clots, this flow may contain shreds of tissue; (f) cramping pains more or less severe with an uneasy feeling in the pelvis; (g) a careful general and bimanual examination may further disclose changes in the breasts: purplish discoloration of the mucous membrane of the vagina and cervix uteri; enlargement of the uterus and a soft, tender and slightly movable tumor behind and to one side of the uterus.

Diagnosis at the time of rupture: I have already pointed out that usually these cases are not seen until after rupture occurs. At this time the diagnosis is more easily made, and we look for the following symptoms: Almost unbearable, sharp, tearing, cutting pain, unmistakably referred to a definite location, and accompanied by nausea. There are present all the signs of internal hemorrhage. Prostration is shown by frequent and rapid respirations, rapid and thready pulse, and body covered with a cold, clammy perspiration. In addition to this the abdomen is distended and tender, and signs of fluid in the abdominal cavity may be found if the bleeding has been profuse. This is shown by tympany in front and dullness in the flanks. This dullness changes as the patient is turned from side to side.

In carrying out a bimanual examination the greatest care must be exercised, for a gravid sac very readily gives way when roughly handled. The sac varies greatly as regards size, position and consistency. Its size depends upon the age of the pregnancy, and also upon the amount of hemorrhage which has occurred. The consistency, too, is not constant.

Theoretically, it is soft and elastic, but, as a matter of fact, especially after an effusion of blood into the wall it may feel just as firm and hard as any solid tumor. In the early weeks the sac is usually situated on one side and somewhat behind the uterus, and as it increases it usually extends further and further backward; as it does so it pushes the uterus forward and upward; when the rupture occurs into the layers of the broad ligament the tumor may be distinctly lateral and the uterus strongly pushed over toward the opposite side.

Diagnosis in long standing cases: Undoubtedly in many cases a diagnosis is never made, because of the slight disturbance manifested. Tubal abortion with slight bleeding and subsequent absorption of ovum and blood may never be discovered. The encapsulated remains of a pregnancy, either in the tube or the free abdominal cavity, may never be suspected, and later be found when the abdomen is opened for the relief of some other condition.

TREATMENT.

Treatment immediately after rupture: A vast majority of the cases are not seen until after rupture. In such cases the all-important question for consideration is, when should one operate? Should we, no matter how great the degree of collapse, open the abdomen, remove the sac and arrest bleeding; or should we delay a few hours in order to combat the shock? If the symptoms of anemia have come on very rapidly and there is evidence of profuse bleeding, one should prepare for operation at once, in the meantime carrying out those measures to be employed to arrest internal hemorrhage. Personally I believe the safer procedure is immediate operation in all cases. If the patient is extremely collapsed, the immediate operation adds very little to the shock already present, for the operation can be performed quickly and with light anesthesia. When immediate operation is undertaken for sudden collapse, the abdominal route is the only one to be considered. Laparotomy may be done quickly, thoroughly and systematically at the patient's home as follows: The abdomen is made aseptic and the patient placed in the Trendelenburg position; an incision is made in the middle line, the hand passed down into the pelvis, and the affected tube and ovary brought to view; the tubal sac is removed, the ovary being left behind if quite healthy; the two cut ends of the broad ligament are then ligated, and the raw edge covered with peritoneum; the pelvic and abdominal cavities are then irrigated with normal saline solution, or simply swabbed with dry sponges. The other tube and ovary should be examined if the condition of the patient will permit.

(2). The woman suffers for some time from occasional faintings, pain and uneasiness over the abdomen, and a bloody discharge from the vagina: In this group immediate operation is always advisable, for one can never tell when all danger is past. The operation in these cases is simple. Usually there are slight adhesions between the tube and the surrounding parts, but these are readily broken down and the sac,—be it an aborting tube or be it a ruptured tube,—is removed. Should the rupture have occurred into the broad ligament and a hematoma exist, the best plan is to split open the broad ligament, clear out all blood clot, and pack the cavity with gauze. The broad ligament is then stitched over, and the end of the gauze brought out through the vagina. It is undesirable, if it can be avoided to bring the gauze out through the abdominal wound, for drainage in that direction is unsatisfactory as it weakens the lower part of the wound. In recent years several operators have suggested a conservative treatment of the tubes in cases of tubal pregnancy. Some, for example, have dilated the abdominal end of the tube and pressed out the ovum; others have split open the tube and shelled out the ovum from its walls. In the latter case the wound in the tube wall is carefully sutured. How far such procedures are advisable I am not prepared to say, as there is not as yet a sufficient number of recorded cases to judge.

Pelvic hematocele: Now a few words concerning pelvic hematocele, and I am done. When recovery occurs from the free peritoneal hemorrhage, a pelvic hematocele forms. The blood collects in Douglas' pouch and, if of large amount, not only fills up the pouch, but extends above the pelvic brim. On examining by the vagina shortly after rupture probably nothing is felt; later on an elastic effusion can be made out, and still later, when the blood coagulates, a semi-solid tumor. Later the hematocele is firmer; it gives a peculiar sensation to the examining fingers, for in some parts it feels hard and in others soft. The patient complains of a general feeling of abdominal and pelvic discomfort. After the collapse is recovered from, the pulse improves, but the temperature which was subnormal rises first to normal and often slightly above. The febrile disturbance is the result of absorption of disintegrating blood. Should the pelvic hematocele be seen later, when a considerable portion of blood is absorbed, the tumor remaining may simulate any of the tumors connected with the uterus or its appendages.

Treatment: In dealing with a pelvic hematocele most gynecologists are in favor of operation, but there are still a few who recom-

mend the expectant plan. This expectant treatment consists of absolute rest in bed, fomentations, something to allay pain, if needed, and later douching and the administration of the syrup of the iodide of iron, all with the object of favoring absorption. The treatment is a very prolonged one, and the recovery most protracted, two or three months sometimes passing before the blood is completely absorbed. In a number of cases it has proved quite successful, but in others adhesions between uterus, intestines, tubes and ovaries have followed and the ultimate health of the patient has been far from satisfactory. In a few cases the hematocele has been infected, and an abscess has formed with all its dangers. If it is decided to operate for the hematocele, either the vaginal or abdominal route may be chosen; there is much to be said for both. By the abdominal route all blood clots can be cleared away, and any other unsatisfactory state of the tubes, ovaries and uterus may be corrected. The disadvantages of this method is that the hematocele, shut off by adhesions between the intestines, is opened into, through the general abdominal cavity. By opening through the vaginal vault, blood clots may be removed without opening into the general peritoneal cavity. Whichever route is chosen, the cavity should be drained with gauze brought out through the vagina.

Personally, I prefer the abdominal route, unless suppuration has occurred in the sac, and I do so because I think it advisable in all cases to examine the tubes and ovaries, and if necessary to suspend the uterus to the abdominal wall, so as to prevent its becoming fixed in a position of retroflexion.

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DISCUSSION.

Jno. W. Price: I have enjoyed Dr. Phillips' paper very much indeed. He has done well to emphasize the importance of early diagnosis in these cases.

In regard to treatment, I believe that, whenever the diagnosis is made, no matter what type of ectopic gestation it is, or whether the tube has ruptured or not, operation should be done, by the abdominal route, and the tube containing the gestation removed. In my opinion, it is unwise to irrigate the abdominal cavity before closing it, because irrigation tends to lessen the normal resisting power of the peritoneum. These cases should never be attacked by the vaginal route. I also believe that drainage after the operation is unnecessary; simply remove all the clots possible

and then close the abdomen without drainage.

Sidney J. Meyers: I understood Dr. Phillips to say that these patients should be operated upon immediately, no matter what their condition may be. It has been my practice, in acute cases where the tube has ruptured and the patient is in shock, if she can be safely transported to the hospital, to endeavor to tide her over until the condition improves somewhat. I have never seen a case of ectopic gestation with severe shock, where I believed immediate operation to be absolutely necessary. I know that many men have compared acute ectopic gestation with ruptured tube with acute appendicitis, but to my mind they are not parallel conditions, because the first is a mechanical proposition while the latter is due to an infection. Therefore, I think some consideration for the patient's condition before operation is advisable.

F. T. Fort: I would like to hear Dr. McMurtry tell us something about the etiology of this condition. I received from Dr. A. Miles Taylor, of San Francisco, a few days ago, a reprint of an article on tuberculosis, in which he stated that tuberculous conditions are etiological factors in the production of ectopic gestation. He reported 60 cases, forty-two of which showed conclusive evidence of tuberculosis, the other eighteen being rather obscure. From his report, it would appear that there is one ectopic gestation in every seven hundred cases of pregnancy. These figures, however, are not borne out by those of other authorities; for instance, Yandell, of Vienna, reports three cases of ectopic gestation in sixty thousand pregnancies, while another authority reports sixteen in one hundred and two thousand.

Lewis S. McMurtry: The essayist has presented this subject in a complete and interesting manner; his clinical classification and grouping of cases are most excellent.

One cannot but wonder that, with the knowledge acquired by clinical observation and from post-mortem investigation, this subject remained so long in obscurity and ignorance. Although the lesion was described and published by Bernutz and Goupil as observed post-mortem, it was not accepted by the profession until the epoch making work of Lawson Tait in 1883 elucidated the subject and established its successful treatment. Only a few years prior to this time a famous actress of world-wide renown died in the suburbs of Paris from this lesion, and after autopsy the most eminent surgeons there announced that death resulted from "uterine apoplexy." Prior to Mr. Tait's elucidation it was known universally as haematocele. A remarkable feature of Mr. Tait's work is that it was so complete and thorough as to the diagnosis, pathology and treatment that no one has added anything of importance to the subject. As elucidated by this surgical genius ectopic gestation soon became

the most brilliant chapter in gynecological surgery. The diagnosis is easily made, and when treated promptly by operation recovery almost invariably follows. We rarely hear of a death following operation for ectopic gestation in the early months.

No adequate explanation has been made as to why the shock accompanying tubal rupture is so profound. We find on opening the abdomen a moderate quantity of blood, such as would not endanger a woman in normal labor, yet the patient is profoundly shocked. There is no clinical picture more alarming than that of ruptured ectopic pregnancy in profound shock. The patient is blanched, the eyes incompletely closed, and the pulse may disappear at the wrist. The temperature is subnormal, and death seems imminent. Doubtless the traumatism involving the sensitive peritoneum and the agonizing pain of rupture cause the shock to be out of proportion to the extent of the hemorrhage. Surgical anesthesia is essential for operations within the pelvic peritoneum. Transfusion of course is contra-indicated when hemorrhage from ruptured vessels is going on. Warm saline solution per rectum and heat applied over the heart will aid reaction. If seen early and the symptoms are progressive, immediate operation should be done. In no operation is expeditious work more essential than in the operation for ruptured tubal pregnancy.

The diagnosis is about the easiest of any surgical condition within the abdomen. The patient gives a history of normal pregnancy of recent beginning, has missed one or two menstrual periods; then comes bloody flow from the uterus which is usually present at the time of rupture. The breasts present the characteristic signs of pregnancy, the uterus is enlarged and the cervix soft. The patient believes herself pregnant and is often thought to be threatened with abortion when the rupture occurs. Many of these cases recover without any treatment whatever. Tubal abortion, and even tubal rupture with a moderate degree of hemorrhage, get well, the blood being absorbed and digested by the peritoneum.

As the essayist pointed out, some of these patients bleed a little and then stop, and then bleed a little more, and go on that way until the diagnosis is established and operation is done. I recall one case illustrating the ease with which diagnosis can be made. I operated upon this lady for a ruptured tubal pregnancy and she recovered. A year later she had a tubal pregnancy in the opposite tube, and before rupture occurred she made the diagnosis herself. I opened the abdomen and found a pregnancy in the tube, which had not progressed to the point of rupture.

As to the cause of ectopic gestation, it has not been definitely established. In a large proportion of cases, it is preceded by a period of sterility. It is found in women free from infection and of recent marriage. I have seen one patient with

rupture who had a child less than a year old. It occurs very frequently in prostitutes who have pursued their vocation for a long time in sterility, and is very often associated with gonorrheal conditions of the tubes. Mr. Tait's idea was that, in the vast majority of cases, there is an inflammatory condition of the tube and that the ciliated epithelium of the tube was destroyed, so that when the ovum got into the tube it was not carried on down the tube. This cannot be sustained in all cases, however, because Williams, of Baltimore, reported a number of cases of ruptured tubal pregnancy in which he found the cilia in the tube and functioning. Kinks and malformations of the tubes undoubtedly account for the condition in many cases.

Harry J. Phillips, (Closing): I wish to thank the gentlemen for their liberal discussion of the paper. I endeavored to present the subject in a simple, clear and concise manner, and to give you the result of my personal observations made at the bedside.

Experimental Polyneuritis.—When fed on an exclusive diet of white bread, whether with or without yeast Ohler noted that fowls develop a definite polyneuritis. When fed on an excessive diet of whole wheat bread fowls remain perfectly well. To say then, that any exclusive diet may cause symptoms of polyneuritis is not true to fact. Apparently, there is present in whole wheat bread not present in white bread some substance or substances essential to the health of the organism. In other words, it would seem that in the relation between whole wheat flour and highly milled white flour we are dealing with the same problem as in the relation between unpolished and polished rice. This problem arises, however, only when the diet is restricted and consists almost exclusively of white flour or polished rice, as the case may be.

Detachment of Retina.—A case of double detachment of the retina in a telegraph operator suffering also from nephritis is reported by L. W. Jones, Rochester, N. Y., (Journal A. M. A., Jan. 23, 1915). The patient had had albuminuric retinitis, which is not uncommon in nephritis, but detachment of the retina from this cause seems to be rare and Jones has not been able to find in conversation with local oculists of large experience, any history of a similar case. Roemer mentions its possibility, and Weeks reports a similar case.

Cultivation of Chick Tissue in Vitro.—When combined the medium used by Smyth consists of egg albumen, 25; trypsinized peptone, 0.25; agar, 0.75; Ringer's solution, 74.

IN MEMORIAM

BENJAMIN W. SMOCK, M. D.

Whereas, Dr. Ben Wilson Smock who departed this life on December 16th, 1914, was for many years a member of this society, and it was ever his pleasure to promote the interest and welfare of the organization, and

Whereas, For a number of years the doctor was County Health Officer of Jefferson County, and through his earnest efforts the office was brought from obscurity to one of the most useful offices in the South, though he was seriously handicapped during the latter part of his career by illness and extreme suffering; his heart was ever in his work, and he gave his best efforts to furthering health measures; therefore, be it

Resolved, That the Jefferson County Medical Society has lost a good friend in his death, and extends its sincere sympathy to his family, and be it further

Resolved, That these resolutions be spread upon the minutes of the society, and a copy be sent to the bereaved family.

(Signed) T. H. BAKER,
MILTON BOARD,
E. T. GRASSER.

JAMES MORRISON BODINE, M. D.

(1831-1915.)

Born in Kentucky, educated in the public parochial and professional schools of his native state, he labored as a practitioner and educator within her confines throughout his life, save short intervals in his early career. The physical, mental and moral vigor drawn from her storehouse was given back without stint to his home people. Trusted by his patients, respected by his students, loved by his friends, honored by his confreres, he builded for himself in their memories an enduring epitaph. If a man's life be measured by years, he was old; if it be measured by service, then was he indeed a patriarch. Such men can be illy spared as citizens, and their going is an irreparable loss to their profession. Living, their influence is constructive; dead, their example becomes an inspiration. Thus, the Jefferson County Medical Society, in his death, has great cause to mourn, but in the heritage of his life and labor, exceeding reason to be both glad and proud that his lot fell alongside ours. In sympathizing with his family we would congratulate them upon such ancestry.

W. C. DUGAN,
C. H. HARRIS,
VIRGIL E. SIMPSON,
Committee.

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PEDIATRICS

P. F. BARBOUR..... *Louisville*

OBSTETRICS

EDWARD SPEIDEL..... *Louisville*

MENTAL AND NERVOUS DISEASES.

CURRAN POPE..... *Louisville*

EYE, EAR, NOSE AND THROAT

ADOLPH O. PFINGST..... *Louisville*

J. A. STUCKY..... *Lexington*

SOCIAL SERVICE

DUNNING S. WILSON..... *Louisville*

PROCTOLOGY

BERNARD ASMAN..... *Louisville*

PRACTICE OF MEDICINE

W. F. BOGCESS..... *Louisville*

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TENTH DISTRICT

I. A. SHIRLEY..... *Winchester*

ELEVENTH DISTRICT

J. S. LOCK..... *Barbourville*

NEXT MEETING STATE ASSOCIATION, LOUISVILLE

COUNTY SOCIETY REPORTS

Clark—As it seems impossible to get any of our officials to tell you and the brethren throughout the State what we are doing in this garden spot of the universe I will take it in hand long enough to say that during 1914, we had the most successful meetings of the last decade seventy-five per cent of the membership came together twice (not once) a month to confab together and to do what we could to improve our selves and to better serve our clientele. Just think of it: for several years we could not get together enough members to make a quorum: and now we can scarcely get an ordinary room or office large enough to hold us. A good hustling secretary, we are told, is the one thing necessary to a successful society, and while that is all right and we have it, we have a hustling, get-up-and-get President to assist, and we believe that without his aid we would have been still beating the bushes away down in the slashes and still be a third or fourth rate society, instead of one of the leaders in this grand old Commonwealth. We believe in holding on to a good thing when we see it and that is the reason we reelected by acclamation W. A. Bush, President; Carl Grant, Vice President, and H. R. Henry, Secretary-Treasurer, at our meeting the 8th of the present month. We were honored by the presence of Dr. J. W. Kincaid, the distinguished President of the Kentucky State Medical Association at the meeting above mentioned, and while he was not at all well, his presence and address was very gratifying and did us much good. So, Mr. Secretary if you really want to know how to do things as they should be done, down in Warren or anywhere else in this good State, just watch the bulletin for our dates and make it convenient to call around and in addition to showing you how to "ride the goat" we will extend the glad hands of many, many Kentucky doctors.

I. A. SHIRLEY.

Taylor—The Taylor County Medical Society met at the New Merchants' Hotel in Campbells-ville, on December 17, 1914, for the annual banquet and election of officers for the year 1915.

There were present, Drs. Buchanon, O. M. Kelsay, S. H. Kelsay, Reesor, Hiestand, Buckner, Gowdy and Atkinson.

O. M. Kelsay, the retiring president, made an address thanking the society for the honors that had been accorded him, disclaiming any merit on his part for such honors. In this address he reviewed briefly the honors that have come to Kentucky physicians, in many states, which honors came from work worthy of the highest praise.

This was a social meeting for getting better acquainted, and was a success from start to finish. However it is a difficult matter for doctors to get together without "talking shop" so the conver-

sation drifted into case reports which were quite interesting.

At seven o'clock the society repaired to the banquet hall, where the small tables were arranged in a triangle, and tastefully decorated with pot plants, besides being filled with good things that appeal to the appetites of hard-working doctors.

The election of officers resulted in the re-election of O. M. Kelsay for President, O. R. Reesor for Vice President, and Dr. J. L. Atkinson, Secretary-Treasurer. C. V. Hiestand was elected Delegate and E. L. Gowdy, Alternate.

Our society ended the year with every active practitioner in the county a member of the society and I think we will hold all of them.

J. L. ATKINSON, Secretary.

Franklin—The Franklin County Medical Society met in the office of Drs. William & Martin, Tuesday February 2nd, at 7:30 P. M., in social session with Dr. L. T. Minnish, as host.

Present, Drs. Keller, Minish, Garrett, Heilman, Wallace, Wilson, Patterson, Montfort, and Williams.

Meeting called to order by President Keller. Minutes of last meeting read and approved.

The following clinical reports were made:

Question: What is the etiology of cases of sudden death, where the cause has been assumed to be "Heart Failure" which led to a general and interesting discussion entered into by every member present but unfortunately no two individuals having the same views of the subject, hence much and varied discussion, with little agreement, no satisfactory explanation and leaving the subject as transparent as mud.

Jno. Patterson, the essayist of the evening, read a paper on "Ectopic Gestation," with report of three successful operations and exhibitions of specimens. Discussed by all present.

L. T. Minish moved that as the next meeting of the society occurs upon the date of the sixtieth (60) anniversary of Dr. Williams' entry into the practice of medicine, March 1, 1855, that the society tender Dr. Williams a banquet in commemoration of the occasion and that a committee of arrangements be appointed by the chair to have charge of the affair and also a committee of invitation, adopted unanimously. The chair appointed Drs. Minish, Keller and Garrett, a committee of arrangements; Drs. Keller and Williams a committee of invitation.

The society then resolved itself into a committee of the whole to enjoy a social session and smoker, a very enjoyable hour and a half was spent in good fellowship, sparkling wit and bright repartee in which Dr. Williams was made the storm center and it was agreed that he was born in 1383 instead of his claim of 1833.

U. V. WILLIAMS, Secretary.

Fleming—The Fleming County Medical Society met in the offices of Drs. Garr, Brice & Garr,

December 30th, 1914, at 6:00 P. M., with T. B. Vice in the chair, and the following members present: J. C. S. Brice, C. R. Garr, Chas. W. Aitkin, Alex. M. Wallingford and J. B. O'Bannon.

The purpose of the meeting was the election of officers for 1915. After discussing two cases of appendicitis, the society proceeded with the election, with the following results:

President, Clyde Garr; Vice President, T. B. Vice; Secretary-Treasurer, J. B. O'Bannon; Delegate to State Society, T. B. Vice; Alternate, Thos. Ribelin; Board of Censors, J. C. S. Brice, one year; Alex. M. Wallingford, two years; Chas. W. Aitkin, three years.

All members present paid dues for 1915.

J. B. O'BANNON, Secretary.

Garrard—The Garrard County Medical Society, after remaining quiescent several years, was resurrected and reorganized at the Kengarlan last Thursday night, January 21st. The meeting was interesting and harmonious and was attended by Drs. Amon, Acton, Kinnaid, Elliott, Rose, Montgomery, Gilbert and McWilliams. The following officers were unanimously elected: President, J. M. Acton; Vice President, J. S. Gilbert; Secretary, J. B. Kinnaid. Drs. Amon, Elliott and Kinnaid were appointed to prepare a schedule of fees to be submitted at the next meeting, January 28th. It was the unanimous opinion that the fees of the doctors were not commensurate with the high prices of commodities, that the prices of the necessities of life had advanced to such an extent, that their earnings were not sufficient to meet expenses and that instead of prospering all were growing poorer. It was therefore decided by a unanimous vote to prepare a just and reasonable schedule of fees which would not work a hardship upon the people and at the same time benefit the profession.

A plan will be proposed at the next meeting whereby "dead beats" and imposters may be handled in such a way as to make them remunerative patients. Dr. Cain, of Somerset, Counselor for this district, will probably attend the next meeting.

J. B. KINNAID, Secretary.

Harrison—The Harrison County Medical Society met with H. T. Smiser November 2, 1914. The President, Dr. Smiser, called the meeting to order. Minutes of last meeting read and approved. Members present: Drs. Wells, N. W. Moore, Best, Rees, Vanderin Wood, Swinford, Petty, McDowell, W. B. Moore, Smiser, Givens, Martin and Boyd.

J. M. Rees reported a case of syphilis contracted from a male pervert. Drs. Wood, Wells and Smiser discussed the case.

L. S. Givens read a paper on the "Use and Abuse of Cocain in Ophthalmology."

M. Best read a paper on "Oral Sepsis." These papers were discussed by J. E. Wells,

Wood, Smiser, N. W. Moore, Rees and Boyd.

The society then adjourned to take lunch with Dr. Smiser. Every one present enjoyed this lunch equally as much as they did the scientific meeting.

W. B. MOORE, Secretary.

Henderson—The Henderson County Medical Society met at the Commercial Club Rooms in annual business meeting on December 14th, 1914. President W. A. Poole in the chair. There were present Drs. Letcher, Floyd, Quinn, Moseley, Stone, Neel, Griffin, Ligon, Denton, Graham, Ridley, Sellers, Galloway, Dunn, Hancock, Busby, Powell, and Dr. Clay visiting.

In the absence of Secretary Neary, Dr. Denton acted as secretary. Minutes of the previous meeting read and approved as read. Upon motion duly seconded and carried, the society proceeded to the election of officers for the year 1915. The following were elected by ballot and upon motion their election was made unanimous:

President, Archibald Dixon; Vice President, J. H. Letcher; Secretary and Treasurer, Peyton Ligon; Delegates, J. W. Stone, J. C. Moseley; Alternates, E. N. Powell, E. L. Busby; Censor A. S. Denton.

Suitable resolutions of respect and congratulations were passed and delivered to Dr. Arch Dixon in honor of the fiftieth anniversary of his marriage. Drs. Letcher, Stone and Dunn were appointed to make arrangements with the Y. M. C. A. trustees to hold our meetings there. There being no further business the society adjourned.
PEYTON LIGON, Secretary.

Knox—The Knox County Medical Society met in regular session in the office of Dr. Burnside, at 11 A. M. December 28, 1914, S. C. Jones, President, presiding, it being the annual election of officers, that duty was disposed of in the following manner:

G. H. Albright, was nominated for President. Motion that he be elected by acclamation. Seconded and carried, and Dr. Albright was declared unanimously elected President for the year 1915. W. Burnside, nominated for Vice President. Motion that nominations close and that he be elected by acclamation. Seconded and carried. Dr. Burnside declared unanimously elected Vice President for 1915. Chas. L. Heath, Secretary and Treasurer, was nominated for re-election, by motion and second, nominations closed and Dr. Heath was elected by acclamation. G. H. Albright was elected Delegate, and S. C. Jones, Alternate. The Board of Censors are: J. W. Parker, 3 years; W. B. Dozier, 2 years; W. Burnside, 1 year.

This completing the election of officers the payment of dues was taken up with the result that every member has paid for 1915.

CHAS. L. HEATH, Secretary.

Knox—The Knox County Medical Society met with G. H. Albright at 1 P. M. The following members were present: Drs. Albright, Lock, Herndon and Heath.

The secretary read the minutes of the December, 1914, meeting, which were adopted as read.

The secretary reported that all members of 1914 had paid annual dues, with the addition of W. C. Black, of Barbourville and B. F. Herndon also of Barbourville. Drs. Herndon and Black are old members of the society but for a few years have not been members, having been engaged in other business than medicine.

C. L. Heath read a paper on "Constipation." The paper was discussed by members present.

John G. Tye was on the program for a paper, but owing to being sick, was held over until next meeting.

The weather and roads could hardly have been any worse than to-day, mud from six inches to 2 feet deep, with at least 1-2 inch of ice and sleep on top to help make traveling over our mountain roads so delightful in winter. The secretary was three and one-half hours on the road from his home to Barbourville, a distance of nine miles.

John G. Tye was reported to have typhoid fever.

Society adjourned until the fourth Monday in February.

C. L. HEATH, Secretary.

Shelby—The Shelby County Medical Society held its first meeting of the new year the third Thursday in January, the 21st, 1915, with the following members present: Drs. Lawrence, Ray, Eggen, S. L. Beard, F. M. Beard, Nash, McMurry, Hughes, E. B. Smith and Allen. The officers elected for the present year are as follows:

President, J. N. Smith; Vice President, Harmon Nash; Secretary-Treasurer, W. E. Allen; Delegate to Kentucky State Medical Society, Harmon Nash.

Minutes of the previous meeting read and approved. A. C. Weakley elected to membership in this society.

W. E. Allen, the secretary, read a paper entitled: "Calomel, Its Uses and Abuses," which brought out a very animated discussion, participated in by all the members present.

E. B. Smith, of Shelbyville, promised to write a paper for the February meeting of the society, subject of his own selection.

The society was entertained at luncheon by Dr. Lowry Beard, who did the honors in a lavish style.

There being no further business to come before the society an adjournment was made until the third Thursday in February.

W. E. ALLEN, Secretary.

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No. 5

EDITORIAL.

THE FAMILY PHYSICIAN.

It is with a considerable degree of pleasure that we reproduce in this issue from our esteemed contemporary, *the Southern Medical Journal*, an address delivered at Richmond, at the recent meeting of the Southern Medical Association, by Dr. Cary Grayson of the Navy. This tribute to our predecessors and appeal to all that is best in everyone of us seems especially appropriate as coming from the family physician of the President of the United States. We suggest to our readers that the attention of their wives and sweethearts be called to Dr. Grayson's article and we are sure it will appeal to them especially as he was the attending physician during the last illness of the beloved wife of President Wilson. We are sure that this ease appeals more deeply to the hearts of the members of our profession in Kentucky than any other in many years. Dr. Grayson's address was a model in diction and in presentation, and THE JOURNAL is sure it will come before an appreciative audience in Kentucky.

PERSONAL.

This is the last issue of the JOURNAL which will reach those of our members who have not paid their dues to their county societies. It is a matter of very great regret to the editor that many of the best physicians in the State fail to receive many issues of the JOURNAL which really belongs to them because they do not pay their dues regularly. A letter received this morning from one of our best county secretaries states that he would prefer collecting medical bills to collecting dues from doctors. This ought not to be the case. The county secretary is paid nothing for his trouble and he is merely doing each member a service in collecting and transmitting his dues.

It is not right to compel him to dun you over and over again for a legitimate debt you owe and should be glad to pay. In the whole history of organized medicine there has never been a time, and there is no other State now, where so much is secured by the payment of the county dues as in Kentucky. This is the only state where there are no advertising, itinerant quacks muleting and mistreating our people. We have unquestionably the best medical organization in the United States. It is such because it is really democratic and because every member is treated like every other one and no man has more influence in the organization than have all of them. This JOURNAL has not failed to publish any communication from any one of its members for eight years. We are confident this statement can be made by no other medical journal in existence. This is the only Medical Journal published which guarantees the members of the Association which owns it against any financial loss from dealing with its advertisers. The JOURNAL actually costs about five dollars for every member: the difference between your dues and this cost is paid by the advertisers. Besides all this, members who are unjustly sued for malpractice are furnished with attorneys, all their court costs are paid, and they have the use of the General Council of the Association who has had more experience along this line than all the other attorneys in Kentucky.

All these activities of the Association can only be kept going if we have the constant assistance and cooperation of every worthy member of the profession. If you have not paid your dues, will you not do so to-day so that you may not miss a single issue of THE JOURNAL and so you may not be without the protection of the medical defense for even a day.

THE PHYSICIAN AND THE HARRISON NARCOTIC LAW.

"From the large number of inquiries received, it is evident that many physicians are in doubt as to what they are required to do under the Harrison law and what the law will do to them. So many misstatements on this subject have appeared that a brief summary of the purposes and requirements of the law may be reassuring.

"The law affects the physician both as a prescriber and as a dispenser of drugs. The only effect it has on the former—the prescribing physician—is that it requires him to register with the collector of internal revenue of the district, and that in writing a prescription for narcotic or habit-forming-drugs he must write thereon the name and address of the patient, have on the prescription his office address and his registry number and sign his name in full. He can—and should, probably, if he has printed blanks—have his registry number printed on the blank. He need not keep either copies or records of prescriptions; this is done by the druggist. These prescriptions cannot be refilled. This is all there is to the Harrison narcotic law so far as it affects the prescribing physician. The only expense is in securing his license once a year, at a cost of one dollar. And the only facts to be kept in mind in writing prescriptions are that the patient's name and address must be written thereon and that the physician must sign his name in full—precautions, however, that should be taken on all prescriptions."

The Kentucky State Law requires that the name of the patient must be written on every prescription and provides that no prescription can be refilled for any other than the patient. This is under the Pure Food Law. But under the Harrison Bill no prescription containing opium or cocaine or any of their derivatives can be refilled at all.

"If the physician desires any of the specified drugs for his own use, he must then make out an order for them on a blank form bearing his registry number. These blanks are furnished by the Internal Revenue Department in packages of ten for ten cents. The physician cannot order drugs for his own use on a prescription blank.

"If a physician is in personal attendance on a patient he can administer any treatment he sees fit in the form of hypodermic injection, sprays, applications, etc. If he orders a nurse to give such treatment, then the written order must appear in the history sheet with the physician's initials. The statement recently appeared in a druggists' journal that an official ruling had discriminated between a visit to the patient at his home and personal treatment of a patient by a physician at his office,

and that one was personal attendance and the other was not. This statement is without foundation. No such ruling has been made.

"If a physician dispenses his own drugs, then he must conform to the same restrictions as a druggist. He must order the drugs specified by this law on the blanks furnished by the internal revenue collector, and he must keep a record of the dispensing of such drugs, the date, the quantity and the name and address of the person to whom they were given. This record must be kept in a "suitable blank book," and must be preserved for two years. Drugs dispensed while the physician is in personal attendance on the patient do not need to be recorded. Neither do preparations which do not contain more than 2 grains of opium, 1-4 grain of morphine, 1-8 grain of heroin or 1 grain of codein to the ounce.

"These provisions are simple and need cause the physician little annoyance. The great majority of physicians write prescriptions. Physicians who dispense, only occasionally dispense preparations of narcotic drugs. The restrictions for both classes are simple and easily observed. The cost for all physicians is the same, a nominal fee for registration, a small cost for order blanks. Additional rules may be found necessary as the law is enforced, but there is at present nothing that need cause physicians any inconvenience or annoyance."

THE HARRISON LAW A NATIONAL OBLIGATION.

The following editorial from the March 6 issue of the *Journal of the American Medical Association* is reproduced because of its importance to every medical practitioner in Kentucky:

"Both newspaper comments and professional criticism indicate that there is much misunderstanding of the Harrison law, which has just gone into effect. Many physicians have not fully grasped its purpose. A brief statement of the history of the law may, perhaps, be of value.

The Harrison law is not the result of any sudden spasmodic impulse on the part of Congress. It is, on the contrary, a part of a carefully considered program for the control of the traffic in habit-forming drugs and especially in opium. This movement is not confined to this country; it is international, although the United States, it is a pleasure to record, has been the leader in the movement. It has been a part of the established policy of our government since the earliest relations with China and other oriental nations to discourage the opium traffic in the Far East. As early as 1833, a treaty with China forbade any American citizen engaging in the opium

trade. In 1906, China began earnest efforts to crush out this evil. To aid her in this, the United States initiated an international movement to secure the cooperation of the leading Western nations. As a result, there met at Shanghai in February, 1909, the representatives of thirteen nations, comprising Austria-Hungary, China, France, Germany, Great Britain, Italy, Japan, the Netherlands, Persia, Portugal, Russia, Siam, and the United States. This conference resulted in the establishment of the International Opium Commission, appointed to study the entire question and to submit recommendations. The next step was taken December 1, 1911, when a conference of the powers represented in the Shanghai Commission was held at the Hague. January 23, 1912, the members of the conference signed an agreement for a strict regulation of both national and international traffic in opium, morphin and cocaine. To the carrying out of the program for the restriction of habit-forming drugs, not only is our national honor pledged, but also as leaders in this movement, it is the plain duty of our nation to initiate such legislation as may be necessary.

"For the carrying out of our international obligations, three bills were drafted. The first, H. R. 1966, prohibited the importation of opium for any other than medicinal purposes. The second, H. R. 1967, prohibited the manufacture of smoking opium in the United States. Both of these bills became laws over a year ago. As there are only a few firms in the country which import opium and none which manufacture it, these laws affected a limited number of persons and so attracted little public comment. The third bill, H. R. 6282, which became a law December 17, 1914, is the Harrison law, now going into effect. In various forms and under different names it has been before Congress for nearly six years. It does not forbid the sale of habit-forming drugs. Only state laws can do that in this country. It restricts traffic in them to persons engaged in legitimate businesses in order to make it possible to trace these drugs from the importer to the ultimate consumer. The suppression of illegitimate traffic in these drugs can be accomplished only by state laws properly drawn and enforced.

"The object to be attained is the worldwide restriction of the use of opium and cocaine to their proper medicinal purposes. In securing this, the sympathy and support of every right-minded man and woman should be forthcoming. But physicians, especially, as those who know better than any other class the dangers and ravages of drug addictions, should endorse and support in every way this effort for the uplifting of humanity, to which our national honor is pledged."

PARTNERSHIPS AND THE HARRISON LAW.

The Acting Commissioner of Internal Revenue writes on March 2 to the editor as follows:

"Replying to your letter of February 27th, you are advised that each member of a partnership composed of physicians, should register and pay the special tax required by the Harrison Narcotic Law. The partnership should also be registered under the firm name. A member of such partnership, when absent from his office, could not make use of the firm's registry number in writing prescriptions, as his own name must appear on such prescription. Should the firm desire a supply of any of these drugs coming within the scope of this law, for use directly in the office, such orders should have indicated thereon the registry number of the firm."

This decision is reproduced for the benefit of members of the profession practicing in partnerships, as it seems to be of very considerable importance.

A DECISION UNDER THE HARRISON ANTI-NARCOTIC LAW.

Our members are informed that Hon. David A. Gates, Acting Commissioner of Internal Revenue, handed down the following decision on February 24: "For the purposes of checking up the quantity of drugs, coming within the scope of the Harrison Anti-Narcotic Law, received and dispensed this office deems it necessary for a record to be kept of all such drugs so dispensed or distributed in the office of the physician dentist or veterinary surgeon. A record must be kept also of these drugs left with a patient to be taken in the absence of a physician, dentist, or veterinary surgeon. Only such drugs as are *administered directly to the patient by the physician in person, when away from his office*, are exempt from record." Our members are advised to govern themselves accordingly.

THE STATE ANTI-NARCOTIC LAW.

In this issue we present the decision of the Court of Appeals in the case of the Commonwealth vs. Gabhart. From careful reading it will be seen that opium and its derivatives can only be used or prescribed by a registered physician for "legitimate purposes." The word "legitimate" in the statute is not used in its original sense of lawful, but in its secondary sense of proper or warranted, as when we speak of a legitimate conclusion or a legitimate argument. Morphine is sold for legitimate purposes under the statute, when under the facts, a druggist or doctor, acting

according to the ordinary usages of the profession and exercising ordinary care, would have made the sale. This is a question for the jury and should be so submitted to them by an instruction of the court.

The Harrison Narcotic Law is a Federal Law passed by the United States Congress and is merely a tax law with a census kept under the tax regulations. The records under this Federal Law are competent and *prima facie* evidence under the State Law which is properly severe in its penalties, and it behooves the members of our profession to carefully enforce it. It is certainly not a "legitimate" use of morphine or similar habit producing drugs to prescribe or dispense them to habitues. This editorial is written to warn members of the profession in Kentucky, who might be tempted by the pleadings of these unfortunates, that such procedure will subject them to all the pains and penalties of the law, and the combination of the Federal and State Laws makes conviction practically certain in every case sooner or later. It is well known that the Federal Courts are slow in initiating action but it is fortunate for the people of the United States that they are equally certain in concluding it.

WINE OF CARDUI ACTIVITIES.

The February 27th issue of the *Journal of the American Medical Association* contains an interesting editorial under the above title. The following paragraph is worth reading: "An interesting story could be written of some curious coincidences that have occurred since the Chattanooga Medicine Company and its chief owner brought their suits. Articles appearing in the month-pieces of the 'patent medicine' interests warning the public against the fell designs of the 'Medical Trust' have been reprinted and widely circulated; nostrum-championing editorials of the 'canned' variety have cropped out in those newspapers that may always be counted on to come to the defense of the 'patent medicine' business; decoy letters have come to *The Journal* office from hypothetical 'doctors,' mailed from postoffice addresses in villages in which the writers apparently rented a post office box and to which they went in motor cars to get the 'answers' that never came; detectives have posed as journalists seeking information about nostrums of the alcoholic- tonic type and have played the part of visitors to Chattanooga, solicitous (?) of the well-being of the new church organized after the split in the First Methodist Church of that city following the Wine of Cardui exposures; attempts have been made to 'work' stenographers; efforts have been put forth to be given advance the dates of public talks to be given

on the nostrum evil under the auspices of *The Journal*—these are but a few of the many things that have occurred. Whether any of these occurrences bear any relation to Wine of Cardui suits or are wholly or partly inspired by the general 'patent medicine' interests, or whether they are simple coincidences, we leave for our readers to decide."

It appears that many of the physicians who have any interest, directly or indirectly, in drug stores are being carefully sought out by the promoters of this campaign in support of this nostrum, which is practically, if not entirely, of medicinal value only in proportion to its alcoholic content. If its manufacturers, in good faith, believed in the medicinal value of the herbs which it contains, they could prove it by cutting out the alcohol entirely and either selling the herbs in packages so that tea could be made of them, or make an extract and preserve it in glycerine and sugar, or they could make the solution a great deal stronger so that a teaspoonful, or even less, of the same proportion of alcohol, would contain more of the medicine than a tablespoonful dose now contains. *THE JOURNAL* knows those members of the medical profession of Kentucky who are incidentally interested in the drug business too well to believe that they can be misled by specious arguments of the fraudulent nostrum.

NEW AND NON-OFFICIAL REMEDIES, 1915

The Journal of the American Medical Association, 535 North Dearborn Street, Chicago, announces the publication of this year's edition of the above named book which will be sent post paid for fifty cents bound in paper, and for one dollar bound in cloth.

The present edition of New and Nonofficial Remedies marks the tenth year of the existence of the Council on Pharmacy and Chemistry. Since 1907, when it was published as a modest pamphlet, New and Nonofficial Remedies has grown to a volume of 426 pages. It may be fairly said to contain descriptions of all the worth-while proprietary and non-official remedies now on the market in the United States. Further, it is the only book or publication which contains comprehensive and trustworthy discussions of the composition, source, properties and dosages of proprietary remedies. As every physician should be informed about new remedies, even if he has little use for them, a copy of the book should be in the possession of all. It is not too much to say that a physician who is not familiar with New and Nonofficial Remedies is doing his full duty neither to himself and his profession, nor to his patients.

In addition to the individual descriptions

of drugs and preparations, the book contains critical discussions of the various classes of preparations. These general discussions compare the value of the newer remedies with the established drugs which they are designed to displace. Thus the book affords an authoritative review of therapeutic progress.

The book contains, as a supplement, a list of references to discussions of articles not admitted to New and Nonofficial Remedies which have appeared in the *Journal of the American Medical Association*, in the Annual Reports of the Council on Pharmacy and Chemistry and in the Reports of the A. M. A. Chemical Laboratory. This list of references enables physicians readily to obtain information in regard to the many nostrums which are exploited to the medical profession.

THE JOURNAL urges every physician, not only those who have heretofore purchased other editions, but every physician in Kentucky to secure this work. It is the only guide one can secure which is of real value as regards proprietary medicines, and unless you know the composition and the actual indication for these they should not be prescribed at all.

PHYSICIANS' MISTAKES.

NARCOTICS.

Physicians fall into error readily in the use of narcotics. The subject is one presenting many difficulties. The certainty of prompt relief of troublesome symptoms by their use is a constant temptation to administer narcotics. Nervous irritability, insomnia, cough, pain and many other annoying circumstances attendant upon disease may be quickly allayed and the patient pleased with his apparent improvement. But the nervous symptoms are nearly always manifestations of chronic ill health and usually indicate a susceptibility to drug addiction. A cough that does not tire the patient, upset his stomach, interrupt sleep or threaten hemorrhage is usually of some value to the patient and does not call for suppression. Even severe pain, if likely to be of long duration, or frequent recurrence, as in tuberculous joint or dysmenorrhea, should not be treated by the use of narcotics because of the resulting bad effects and the danger of habit.

Of course narcotics are useful and to be used freely when required, but there is no reason for disclosing their use to the patient. Why need the doctor tell his patient that he is giving opiate. Why does the rhinologist or dentist assure his patient that there will be no pain because he has used cocaine? Knowledge of these drugs, their uses and methods of administration, is better kept from the laity.

The new National law on narcotics, the

Harrison Act, is bringing the whole matter sharply to our attention. It tends to make us all think much about narcotics. This is no reason for talking narcotics to our patients.

The new law is an excellent one and worthy of our hearty support. While its administration will put us to a little trouble and inconvenience at first, its aim is so thoroughly in the altruistic spirit of our profession that it should command our earnest co-operation in its administration. Let no physician add to the mistakes we have made in the use of narcotics by the new and very serious mistake of a hostile or hyper-critical attitude toward the new law.

W. W. A.

A NEW DEPARTMENT OF THE JEWISH HOSPITAL.

A letter from Dr. Leon L. Solomon, the Dean of the Medical Staff of the Jewish Hospital, Louisville, Kentucky, tells of the establishment of a Clinical Research Laboratory in connection with the Hospital. This is a most interesting development in modern hospital management. Quarters have been provided on the first floor, and every modern means will be found for the determination and accurate estimation of questions in pathology, bacteriology, serology, chemical analysis, microscopic examinations, etc. The hospital is very fortunate in having secured the services of Dr. Leon K. Baldauf as Director in charge of the Laboratory. The generosity of the proposed plan is shown in an invitation to the profession at large to patronize the Research Laboratory whether their patients are patrons of the Jewish Hospital or not. It is a pleasure to call attention to this model of scientific and professional progress and to congratulate the Jewish Hospital Association.

Treatment of Furunculosis, by Fried.—The best local treatment is the application of salicylic soap plaster. It should extend on to the healthy skin and should be changed every twelve to thirty-six hours, the part being thoroughly cleaned with benzine to remove the remnants of the plaster and then swabbed with alcohol. In addition to the local treatment, injections of opsonogens, solutions of dead staphylococci, have given very satisfactory results. One hundred million dead staphylococci are injected on the first and third days, 300,000,000 on the fifth day, and 500,000,000 on the seventh day. The subsequent doses depend upon the result obtained.—*New York Medical Journal*, Dec. 19, 1914.

SCIENTIFIC EDITORIALS.

NEW IDEAS OF THE DIAGNOSIS AND TREATMENT OF GASTRIC AND DUODENAL ULCERS.

It might well be said that probably the most noteworthy advance in the diagnosis of gastric and duodenal diseases is the use of the X-ray examination after the introduction of bismuth into the digestive tract.

Quervain has recently said: "The extent to which surgical operations in cases of gastric ulcers may be successfully performed depends chiefly upon our ability to diagnose."

Undoubtedly the operations for gastric and duodenal ulcers are the most gratifying and the finest achievements in modern surgery. Many of these cases which were formerly treated as "gastralgias" and "gastric neuroses," until an accidental hemorrhage or acute perforation set in, are now easily recognized by the Roentgen examination and treated before serious complications or possibly a cancerous condition has developed.

Mayo has said: "The laboratory tests, so long depended on and which had proved so fallacious a guide, have been justly relegated to a minor position. These tests should not be abandoned, however. They are of value in differentiation, and since they may now be checked up by other means, this value should increase as we learn correctly to interpret their results."

Carman believes that the value of the X-ray in the diagnosis of lesions of the digestive tract is not generally appreciated and notes that in the laboratory of the Mayo clinic cancer has been diagnosticated in over 90 per cent. of the cases, gastric ulcer in over 80 per cent. and duodenal ulcer in from 50 to 60 per cent.

Von Eiselsberg in his recent address before the Clinical Congress in London said: "In spite of the progress made in the diagnostics of gastro-intestinal diseases, among which I place the Roentgen examination first the choice of the method of operation for gastric ulcer and its complications can best be made on the operating table when the abdominal cavity is opened. It is most important that the operator should satisfy himself whether there exists an ulcer with an unhealed surface or a healed ulcer, in fact a scar, and whether the ulcer is situated at the pylorus or at a distance from it."

When in possession of these facts he is in a position to decide which operation is to be recommended—gastro-enterostomy only, pyloric exclusion or as a last resort, resection.

The early recognition of gastric ulcers is not only of value for the immediate relief of the present distressing symptoms and the great risk of acute perforation, but also of that lurking danger of a cancerous formation on the old chronic ulcer base.

This danger is ever present although some of the greatest authorities seem to differ as to the percentage of its occurrence. Wilson and MacCarty examining specimens furnished by the Mayo clinic estimate that 71 per cent. of the callous ulcers of the stomach present lesions of cancerous development, while others assign only 10 per cent. as the average frequency of a cancerous degeneration of gastric ulcers.

Hartmann says: "Without going so far with certain authors as to deny the existence of ulcero-cancer, which would be too radical, we think, nevertheless, that the development of a cancer upon a chronic ulcer of the stomach is rarer than certain recent authors consider it to be." Kuttner further says that the termination of ulcer in cancer is extremely rare and that the apparent callous ulcer is often nothing but a cancer.

The clinical signs of ulcer of the stomach and of the duodenum, as that of alimentary stasis, a sign of stenosis due to a lesion situated in the immediate neighborhood of the pylorus which may be on the gastric or the duodenal side, are generally well known.

Moynihan has even gone so far as to say that the typical syndrome of duodenal ulcer is a story of late pain, a painful sensation of hunger relieved by the taking of food, is sufficient to determine in his opinion, a diagnosis of ulcer by correspondence with the patient, even without an examination.

Considering the surgical treatment, and it might be well to emphasize the fact that for chronic gastric and duodenal ulcers there is no other means of safe and permanent cure, free from the after menace of cancer development, the tendency of the present is to excise completely the ulcer whenever possible.

Gastro-jejunostomy is generally accepted as the most beneficial of all the surgical procedures for gastric and duodenal ulcers, but where there are complications and doubts as to malignancy, a radical resection is the only thing to be considered. Rodman has for several years advocated the radical operation and says: "If the ulcer, or ulcers, are situated at or near the pylorus, as they are in about 80 per cent. of all cases, and the pyloric end of the stomach and proximal portion of the duodenum can be easily mobilized, pylorotomy which gets rid of the existing ulcers, and prevents future ones to a large extent, removing as it does four-fifths of the ulcer-bearing area, is certainly the operation of choice. The frequency with which hemor-

rhage, perforation and cancer, especially the latter, follow gastro-enterostomy, show it to be wholly inadequate."

Special surgical procedures have their place in the technique of gastric operations, and while they often yield brilliant results in selected cases, the fundamental principles of treatment remain the same.

JOHN R. WATHEN.

PAINLESS LABOR.

The multiplicity of papers in the medical and lay press in regards to twilight sleep will at least arouse an interest in the ordinary measures that can be used to lessen the suffering of a woman in labor. It has always been the writer's opinion that a woman in this condition is entitled to all the relief that can be given her provided it does not unnecessarily endanger her life or that of the child. I say unnecessarily, because there are no artificial measures that we use that are absolutely harmless, however that does not prevent us from anesthetizing our patients with ether, morphine and cocaine in surgical operations, and when such operations are followed by shock, uremia or other complications, we do not try to place the whole blame for the condition upon the anesthetic used. Consequently when cases of asphyxia occur with the scopolamin narcosis, then we must be just to the method and remember that dangerous and even fatal asphyxia is not so uncommon in the labor cases as ordinarily conducted. That such anesthetic measures should be used with extreme care on the pregnant woman is self evident and in consequence the writer is not an earnest advocate of the extreme use to which such anesthetics and narcotics are put in the twilight sleep. The woman is not only relieved of pain, but of consciousness of pain, the latter, in order that her supposedly delicate organization may not be shattered for months from a recollection of the trying ordeal through which she has passed. I have used the twilight sleep in a few cases and successfully, and with extreme care and with proper nurses in attendance and in a hospital the mother and baby should have as fair a chance for their lives as under ordinary circumstances. The writer will even claim that the mother and child really have a better chance than in the labor conducted in the ordinary way, because the physician and nurse must be in constant attendance and the fetal heart sounds of the baby watched at definite short intervals. Every one practicing obstetrics will admit that such attendance and such watching over the condition of the baby is not the custom in a labor case as ordinarily conducted.

Accordingly if a woman desires to give

birth to her baby in twilight sleep and is willing to pay for the exceptional attendance on the part of both the doctor and the nurse then she should be provided with it. If doctors attempt to do this work for the ridiculously low fees that obtain in ordinary labor cases, then disaster will surely follow. No doctor can sacrifice eight to twelve hours of constant attendance upon such a case for the customary low fee that he receives. Neither will such a case have the proper surroundings and nursing that the method requires.

Fortunately the majority of women do not wish this absolute oblivion of everything connected with the birth of their child but are more than satisfied if they are carried through the ordeal safely and in comparative comfort.

So many things that we can do for our patients in labor to lessen their suffering has been lost sight of, that it takes an extreme fad like the twilight sleep to rouse us to our ordinary duty.

I have found that the majority of women after a well conducted labor, will admit that the ordeal was not nearly as terrible as they had feared and had been led to believe. Fear, that is the first factor in question. For some unknown reason the young woman pregnant for the first time, as soon as her condition becomes known to her lady friends, is regaled with the most horrible details and accessories of every labor case within the knowledge of those friends. Grossly exaggerated and distorted statements are made to such a woman so that for months, she looks forward to the time of her labor with intense dread. Now if such impressions can be wiped out and the patient be made to believe that they are untrue, then the first step in the rational conduct of a painless labor has been taken. I am in the habit of explaining to my intelligent patients what occurs in the first and second stages of labor. I find that patients complain more in the first stage of labor, with its nagging pains, than they do in the hard expulsive pains, and that is readily accounted for. Hour after hour passes in the first stage with one pain after the other and the patient feels that she is making no progress. It is in this stage also that the patient is constantly surrounded by her family and even neighbors run in and terrify her when they learn that she has already been in labor for a number of hours. There surely must be something wrong. Explain to your patient beforehand if necessary at the time of labor, exactly what occurs in the first stage of labor, that early, and unnecessary interference is harmful to her and that after a time when she is tired and worn out, that you can easily relieve her. If a patient has been in the first stage a number of hours with slow progress and is becoming restless and hysterical then

I give her a small hypodermic of perhaps 1-16 grain morphine. If the case began in the morning or afternoon and an early termination is not expected, then I give a hypodermic of morphine 1-8 grain, with 1-100 grain of hyoscine hydrobromide at bedtime. Such a patient as a rule has had very little sleep the previous night, and by easing her in this way and giving her a few hours of much needed rest, she will enter upon the second stage with renewed vigor. The physician should remain in easy reach of his patient after such a hypodermic, for in my experience it expedites dilatation very much. It is in the second stage however, that the physician can do much, to ease and comfort his patient. First of all by assuring her that now she will make progress, and the birth be over in a few hours. Secondly by teaching her how to make the strong bearing down pains that she has at this stage, most effective in delivering the child. Lastly in giving her enough ether or chloroform to make her fairly comfortable, and yet not to stop labor pains or interfere with the birth of the child. After the rupture of the bag of waters I always make it a point to instruct my patients how to conduct themselves during a pain. Let them draw a long breath and strain very hard as if at stool, until the neck swells and the face gets red. Never try to catch their breath during a pain or to cry out, for that breaks the force of the pains and they will have to have twice as many pains to accomplish the same result. As soon as I find that the expulsive pains are good and strong, then I administer ether with each pain holding the mask close to the face if the pain is a good one or lifting it away two or more inches if I find that the pain is weak. When the head is about to be born I give the ether more freely, retard the birth by three or four pains, in order to have the perineum quite elastic and then with the patient practically unconscious I shell out the fetal head. I have conducted many a case of labor by this method, with the patient so quiet and orderly, that the family in an adjoining room with the door open, only learned of the termination by the cry of the child. I have conducted such cases in summer with the windows and doors open and no one on the outside could judge by any groans or cries what was going on within. A few days after such a labor the patient when asked would always admit that the ordeal was not nearly as trying as she had been led to believe and that she did not really suffer very much.

In view of such experience the writer believes that every obstetrician should familiarize himself with some such method as above outlined for the general painless conduct of his labors, and then when he strikes an extremely sensitive patient he should be able to

adjust the administration of his anesthetic and narcotic to the necessity of that particular patient. If the patient demands absolute oblivion during the birth of the child, then with experience, proper nursing and hospital facilities and the expenditure of additional time, even that can be safely provided for her.

EDWARD SPEIDEL.

OFFICIAL ANNOUNCEMENTS

DECISION OF COURT OF APPEALS ON KENTUCKY ANTI-NARCOTIC LAW.

COMMONWEALTH VS. GABHART.

(Decided October 2, 1914).

APPEAL FROM WASHINGTON CIRCUIT COURT.

1. Indictment—Opium—Indictment for Illegal Sale of—Sufficiency of.—An indictment found under Chapter 86, Acts of 1912, charging a sale of morphine for a purpose other than a legitimate use, is not bad on demurrer because of its failure to allege that morphine is an alkaloidal salt or derivative of opium. The word morphine has as well defined a meaning as the word whiskey and is well known to the generality of the people to be a derivative of opium, possessing great narcotic power and deadly effect as a poison.

2. Indictment—Words—How Construed—Matters of Judicial Notice—Section 137, Criminal Code, provides: "The words used in an indictment must be construed according to their usual acceptance in common language, except words and phrases defined by law, which are to be construed according to their legal meaning." Matters of which the court will take judicial notice need not be stated in a pleading (section 119, Civil Code); and the matters of which judicial notice may be taken are those which must have happened according to the constant and invariable course of nature, or are of such general or public notoriety that every one may be fairly presumed to be acquainted with them.

3. Statutes—"Legitimate Use"—Meaning of—Failure to define does not Render Statute Void for Uncertainty.—The established rules of construction do not require that the sufficiency of penal statutes should be measured by a technical standard that would impair their efficiency and make their enforcement difficult, if not impossible. The word "legitimate" in the statute is not used in its original sense of lawful, but in its secondary sense of proper or warranted, as when we speak of a legitimate conclusion or a legitimate argument. Morphine is sold for legitimate purposes under the statute, when under the facts, a druggist or doctor, acting according to the ordinary usages of the profession and exercising ordinary care, would have made the sale. This is a question for the jury and should be so

submitted to them by an instruction of the court.

4. Evidence—Druggists and Physicians—Expert Testimony—When Permissible.—Druggists and physicians may testify as experts upon the question of whether or not a sale of morphine or other alkaloidal salt or derivative of opium, by retail, is for a legitimate use.

JAMES GARNETT, Attorney General, and C. S. HILL, Commonwealth's Attorney, for appellant.

Opinion of the Court by Judge Settle—Reversing.

The following indictment was returned by the grand jury of Washington County against the appellee, W. S. Gabhart, a regular licensed and practicing physician:

"The grand jury of Washington County, in the name and by the authority of the Commonwealth of Kentucky, accuse W. S. Gabhart of the offense of unlawfully prescribing for, procuring for, selling and dispensing morphine to another person for purpose other than legitimate use, committed as follows, this; the said W. S. Gabhart on the — day of March, 1913; and within twelve months before the finding of this indictment in the county and Commonwealth aforesaid, being at the time a legally licensed physician, did unlawfully, prescribe for, procure for, sell and dispense to Will Harmon, morphine for a purpose other than for legitimate use. The said Harmon was not a wholesale druggist nor a registered pharmacist nor a legally licensed physician, nor a dentist, nor a veterinary surgeon, contrary to the form of the statute in such cases made and provided, and against the peace and dignity of the Commonwealth of Kentucky."

The indictment was found under Chapter 86, Acts of 1912 (page 251), entitled: "An act to regulate the sale of opium or its alkaloidal salts, or their derivatives or any admixture thereof." In addition to certain provisions declaring how opium or its alkaloidal salts or their derivatives may be sold, the act provides:

"Any registered pharmacist, licensed physician, dentist or veterinary surgeon, who shall prescribe for, procure for or sell, or dispense to any person, opium or its alkaloidal salts or their derivatives, or any admixture containing opium or its alkaloidal salts or their derivatives, or otherwise deal in the same for any purpose other than for the legitimate use as herein provided, shall thereby render himself amenable to the penalties as in this section provided;" the penalty being a fine of not less than twenty nor more than one hundred dollars.

The circuit court sustained a demurrer to the indictment upon the ground that the facts therein alleged failed to charge an offense under the statute. This conclusion of

the court below was based upon the theory that as the indictment failed to charge that the morphine prescribed for and sold the purchaser by appellant was an alkaloid or derivative of opium or an admixture containing opium, and the court could not judiciously know or say that such was its character, this omission rendered the indictment fatally defective.

Naturally, this suggests the inquiry: Of what facts may a court take judicial notice? We know of no better rule for determining what facts are to be regarded as within the knowledge of the court than that stated in Newman's Pleading and Practice (New Edition), section 210.

"The Code (Section 119) has expressly declared that matters of which the court will take judicial notice need not be stated in a pleading. This is but an old rule of pleading under the former system. Chitty says that there are some facts of such public or general nature that the courts *ex officio* take notice of them, and which consequently ought not to be unnecessarily stated in the pleading. The judicial notice here referred to not only embraces the general laws or principles of jurisprudence, which of course need not be stated or argued in a pleading, but also includes facts of public notoriety. It will frequently be difficult to distinguish those things the notoriety of which will justify the court in knowing them judicially from those of which proof will be required. No general rule can be laid down on the subject; but it may perhaps with propriety be said that the courts will judicially know all facts affecting the public at large which are known or should be known by the generality of the people of the State. If the memory of the judge is at fault, he will refer to such documents as may be deemed worthy of confidence. To this may be added such facts as are referred to in the general statutes passed by the legislature of the State; all of which are presumed to be known to the people and judges of the Commonwealth."

In 16 Cyc., pages 825-826, the rule is thus stated:

"Courts may properly take judicial notice of facts that may be regarded as forming part of the common knowledge of every person of ordinary intelligence and understanding, but not facts merely because they may be ascertained by reference to dictionaries, encyclopedias or other publications; nor of facts which the court cannot know without resorting to expert testimony or other proof."

In 4 Words and Phrases, page 3858, the same rule is stated in the following language:

"The matters of which judicial notice may be taken are those which must have happened according to the constant and invariable

course of nature, or are of such general or public notoriety that every one may be fairly presumed to be acquainted with them."

While morphine is not named in the statute as an alkaloid, derivative or admixture of opium, we do not suppose there is a person of ordinary intelligence or common understanding residing in the State but has familiar knowledge of its power, as a narcotic, its deadly effect as a poison, and that it is an alkaloid or derivative of opium. The word morphine has as well defined a meaning as the word whiskey and its qualities and effects are as well known to the generality of the people of the State as are those of the intoxicant known as whiskey; and manifestly it would be a work of supererogation to allege in an indictment charging one with the unlawful sale of whiskey that it is a spirituous liquor or intoxicant. In *Pedigo v. Commonwealth*, 24 R., 1029, we said in overruling a petition for re-hearing:

"By section 130 of the Code, facts of which judicial notice is taken need not be alleged. It is unnecessary to prove facts of common knowledge or the meaning of words in the vernacular language. (1 Greenleaf on Evidence, Section 5). It is judicially known that whiskey or brandy is a spirituous liquor; also that beer is a malt liquor. (Bishop on Statutory Crimes, Section 1006a). It is equally well judicially known as a matter of common knowledge, that bock beer or a common beer is a malt liquor. The proof of the witness certainly warranted the jury in finding that the beer he bought was either lager beer or common or bock beer."

By Section 137, Criminal Code, it is declared that:

"The words used in an indictment must be construed according to their usual acceptance in common language, except words and phrases defined by law, which are to be construed according to their legal meaning." Section 460, Kentucky Statutes.

In view of what has been said it is hardly necessary to add that, in our opinion, the validity of the indictment is not affected by its failure to state that the morphine sold by appellee under the circumstances therein alleged was an alkaloid or derivative of opium. It is further insisted for appellee that the failure of the statute to define the words "legitimate use" renders it void for uncertainty. In other words, it is argued that the statute fixes no standard by which the physician or druggist in selling or dispensing opium, its alkaloidal salts or derivatives, is enabled to know what use of it by the purchaser would or would not be legitimate; and that the indictment in simply charging in the language of the statute that the sale made by appellee was for other than a legiti-

mate use of the drug, fails to state an offense under the statute.

Authority may be found, even among the decisions of this court, that apparently sustains this contention, but none of them rests upon the precise state of case here presented; and in the recent case of *Katzman vs. Commonwealth*, 10 Ky., 124, we had under consideration the validity of Section 2630, Kentucky Statutes, which regulates the sale of certain poisons by retail, and declares in substance that a sale or delivery of such poisons shall not be made by any person without satisfying himself that the poison is to be used for legitimate purposes, without defining the words "retail" and "legitimate purposes." A persecution instituted by warrant against *Katzman* for violating this statute resulted in his conviction, and he sought a reversal of the judgment, upon appeal, on the ground that the statute was void for uncertainty because it failed to define the words "retail" and "legitimate purposes." We held, however, that the statute was not void on either of these grounds, and with respect thereto in the opinion, in part, said:

"In the argument in support of the objection mentioned it is said that the legislature should have defined the meaning of the words 'retail' and 'legitimate purposes,' so that a druggist might know what quantity would constitute a sale by retail and what would not be considered a sale for legitimate purposes; and so, that there could not be two opinions as to what these words mean when different courts or juries came to pass upon questions involving a violation of the statute. It may be admitted that although the meaning of the words 'retail' and 'legitimate purposes,' as used in the statute are reasonably well understood, it is nevertheless possible that there might be difference of opinion as to whether in a given state of case the sale of a drug was by retail or for a legitimate purpose, and it is possible that in administering this statute it may occasionally happen that a druggist will be accused who claims not to know what constitutes a sale by retail or what is a legitimate use of opium; and it is also possible that different trial courts and juries may not always be harmonious in the conclusions reached upon this point. But the fact that there may be occasional doubt or want of agreement on this question cannot be allowed to invalidate the statute. If this rule obtained, many penal statutes that have stood unquestioned for years and have been often enforced would be invalid. There are numerous statutes in existence creating and describing offenses the enforcement of which often brings into prominent notice a question concerning the meaning of words in the law about which different persons might reach a

different conclusion. In the trial of many criminal cases there are of necessity submitted to the jury issues involving the meaning of certain words upon which depend the guilt or innocence of the accused; and with the court or jury, as the case may be, is left the decision whether or not the law under which the prosecution is pending has been violated. It would of course be extremely desirable if every penal statute could be made so plain as not to leave any doubt as to its meaning, and so intelligible as that every person could by reading it at once decide what he might with safety do under it. But this ideal condition is not attainable. It would not be at all practicable to define in every statute the meaning of controlling words in it, that there may be difference of opinion concerning when it is attempted to apply them to a given state of facts. To do this would extend to unreasonable length almost every statute that creates and describes an offense, and would also complicate and confuse the administration of the criminal law, as the definitions would often be as uncertain as the thing defined. Every penal statute should be given a reasonable construction, one that will effectuate the legislative intent in its enactment; and if it describes the offense in language that can be understood by persons of ordinary intelligence it will not be declared invalid on the ground of uncertainty. The established rules of construction do not require that the sufficiency of penal statutes should be measured by a technical standard that would impair their efficiency and make their enforcement difficult, if not impossible. A little common sense, as well as legal learning, must be used in the practical administration of the law; and it is not essential that a statute shall be so elaborate in its detail as to attempt to meet every possible state of facts that may arise under it * * *

The opinion then proceeds to state that a person who has intelligence enough to conduct a drug store could not fail to know what would constitute the selling of a drug by retail or to understand the meaning of the words legitimate purposes as used in the statute; that the druggist must, as declared by the statute, first satisfy himself that the sale of the drug or poison is for a legitimate purpose, and that if he, in fact, does not know the purpose for which the poison is to be used, or has any doubt about it, then he must in good faith exercise reasonable care to find out the purpose for which the drug or poison is bought. It is further said in the opinion:

"The statute was intended to regulate sales by druggists, and when it is sought to apply the words 'legitimate purposes' to a sale of drugs or poisons by druggists, they have a technical meaning that may not be

clearly known or understood by courts or jurors, and so it is permissible to allow experts to give evidence as to what is regarded by qualified druggists and physicians legitimate purposes for which sales may be made so that the trial court and jury may be informed as to what is recognized as a legitimate purpose for which these drugs may be sold by those entrusted with their sale, and to whom, in a measure, is confined the knowledge as to what constitutes a sale for legitimate purposes. * * * The question is further suggested that the construction of words and phrases in a statute is usually for the court. Generally this is true. But, if it is shown by evidence that words and phrases are susceptible of two meanings, depending on the state of facts it is attempted to apply them to, the court may instruct the jury in the words of the statute and leave them to find from the evidence whether it has been violated. To illustrate, if there should be difference of opinion on the part of witnesses as to whether or not the sale being inquired into was made for a legitimate purpose, the court should leave it to the jury to find the fact and make their verdict accordingly."

The reasoning contained in the opinion in the case, *supra*, applies with equal force to the statute here involved and must control in the construction to be given the words "legitimate use" found therein. The failure of the statute to define these words does not make it void for uncertainty. The word legitimate in the statute is not used in its original sense of lawful, but in its secondary sense of proper or warranted, as when we speak of a legitimate conclusion or a legitimate argument. Morphine is sold for legitimate purpose under the statute, when under the facts, a druggist or doctor, acting according to the ordinary usage of the profession and exercising ordinary care, would have made the sale. This is a question for the jury and should be so submitted to them by the instruction of the court. If, upon a trial of the case, the appellee should make the defense that the sale of morphine with which he is charged in the indictment was made for legitimate use, it will be competent for him to show by evidence of physicians or druggists that the use for which he sold the morphine to the purchaser is a legitimate use. On the other hand, the Commonwealth may also introduce evidence to show that the use was not a legitimate one; and following the introduction of the evidence the court should instruct the jury upon the issue of fact thereby presented in such manner as will enable them to determine whether or not the sale made by appellee was for a legitimate use as contemplated by the statute.

For the reasons indicated the judgment is

reversed and cause remanded with directions to the circuit court to overrule the demurrer to the indictment and for further proceedings consistent with the opinion.

ORIGINAL ARTICLES

THE OLD TIME DOCTOR.*

By CARY T. GRAYSON, Washington, D. C.

It gives me great pleasure to have this opportunity to meet the members of the Southern Medical Association, and to express my deep interest in you and your work.

The growth of this Association has been rapid in the past few years, and the profession at large, and certainly every one of Southern birth and education, cannot but view with pride and satisfaction the ever increasing importance of this organization in the field of modern medicine. This growth seems to me to be coincident with a general awakening in the South, both industrial and professional, and with the increasing activity in other directions has seemed to me to be especially marked in the case of medical work.

Every section of the South, every city of importance, has its well-equipped hospitals and organization for medical work that is characteristic of an enlightened and advancing civilization, and this splendid showing of the South is largely due to the earnest activities of this Association, which stands in intelligent professional progress and earnest endeavor second to none in this country.

The union of interest, loyal co-operation and the harmonious and fraternal relations of the factors making up this organization are responsible for your steady growth, your power for good, and the high appreciation of your work in the communities you represent and the country at large. When I read of your work, your aims and the beneficent spirit in the interest of humanity actuating your deliberations, I feel proud that it is my good fortune to be privileged to count myself as one of you by birth, by tradition, by education, and by those deep associations of kindred interests that make so strong a bond of union in this organization.

Reared in the heart of Virginia, with a father and grandfather before me in the medical profession of this State, I have been peculiarly affected on my trip here, as memories of their former professional life and the hardships and struggles of the old time general practitioner—the family physician—as shown in their careers and those of many others, have been brought back to me. What splendid men they were, giving lives of un-

selfish devotion to the welfare of their patients, not alone in the care of the sick, but as the trusted and loyal friends and advisers in every detail of life. What wisdom, what patience, what years of toil, what charity, what judgment they showed, what support in sorrow and distress, what companions in joy, what beneficent factors they were in the communities in which they lived.

Contrasting their lives and work with ours, one cannot but realize how much we owe to them as examples of what the highest type of man can be and do. They, by their work and lives, have laid the foundations on which has been built your present splendid practice of medicine. Their lives have been examples that coming generations will seek to reproduce in their offspring. Their lives have inspired respect and confidence in your profession that to-day is one of the chief factors of your success.

The same problems that confronted you, they met as best they could, single-handed, without the aid of specialists or laboratories, splendid, well organized hospitals, and the thousands and one accessories that enable you to-day successfully to carry on your work.

We to-day are too apt to measure our success by our material prosperity; they built better and more nobly in the love and filial trust of their patients and the consciousness of trying to their utmost to fulfill that highest privilege of mankind, to do good to our fellow men. So as we press on in the effort to master new and unknown fields of medical research, let us not forget the splendid work and character of these noble men, from whose efforts our present lives have sprung. In the midst of our absorbing activities let us not forget the gray and careworn brother who still plods the "trail of the lonesome pine," seeking to carry hope and help to the sick and afflicted in many an unknown field.

You will pardon my reflections on the past, I know, and with me will clasp, in deep affection and respect, the aging hands that are gradually vanishing from our midst as the Old Time Doctor disappears in the bustling and thriving communities from which you come, and stimulated by their pride in your achievements and advances, will turn once more with renewed energy to the great problems before you. Perhaps the problems most striking to the world in your work and matched with greatest interest at the present moment are those of pellagra, hookworm, tuberculosis, leprosy, malaria, and the immunity from disease that preventive medicine is making practicable in the intelligent and earnest educational work in the health and hygiene of every state leading gradually, but surely to the development of what in time will be the most useful and beneficent of all branches of

* Public Address, Southern Medical Association, eighth annual meeting, Richmond, Va., November 9-12, 1914.

the government work for the people, the establishment of our National Department of Health.

The old time family physician, being a broad-minded and greatly beloved and respected citizen, was looked up to for the solution of every problem with reference to life and death that involved the human race from the time of Jenner down to and including the present-day specialism. He solved these problems in a rough and rugged, common-sense way, and thereby placed himself without any solicitation or effort on his part in unanimous nomination in the hearts and minds of every one he came in contact with, as the original member of the National Department of Health.

Many of us, my friends, may never reach the "portals of Fame's proud temple shining afar." We may not wear the epaulets of exalted rank, nor stand in the Nation's Capitol, crowned with civil honors. We may not, like St. Paul, open the Book of Truth to a heathen world, nor tread the martyr's holy path to glory. But in the humble sphere of the good physician we may win a grand and glorious victory. It may be ours to do the little things on earth, to visit the sick, to comfort the lowly, to cheer the weak, to raise the fallen, to minister even a cup of cold water in His name; and though the world may build for us no monument of marble and history's page reflect no brilliant deeds of valor, yet surely our reward shall be a crown of rejoicing, pure and fadeless from the pierced hands of the Prince of Peace!

Ladies, I had thought my task done, but it would be unpardonably incomplete, and I would do violence to every impulse of my nature, did I fail to express to you from a grateful heart my profound appreciation of the distinguished honor done this occasion by your respectful attention and inspiring presence.

In a gathering of this kind my story would be but half told if I did not give in large measure my tribute of appreciation of the heroic efforts of the ladies of the National Red Cross in doing their utmost to alleviate the appalling horrors of the present conflict in Europe. In this stupendous exposition of human suffering, she stands as a "rock in a weary land," in her magnificent up-lift work among the widows and children of those who fell on the field of battle. In this latter situation where men are torn and managled by the juggernauts of war, she places her soothing hand upon the fevered brow, and, unlike the soldiers in far-off Algiers, there is "neither lack of woman's nursing nor dearth of woman's tears."

CHLOROFORM AND ETHER ANESTHESIA.*

By C. E. VINT, Russell.

The limited time we have at our disposal this afternoon, calls for a short paper on this lengthy and important subject. I will endeavor, merely, to call your attention to a few of the important points in anesthesia generally neglected by the general practitioner. Ether and chloroform being the two agents in general use, my remarks will be referable to these two drugs only in so far as they are used in general anesthesia.

While the preparation of a patient is not feasible in every instance, still if the case admits of it the patient should be prepared prior to taking the anesthetic. A purgative twenty-four hours before operation often helps toward a smooth anesthetic. This should not be too drastic as it is well to give the bowel at least 8 hours rest before operating. The diet should be light for the last 36 hours, and the morning of the operation breakfast should be withheld. In selected cases a little beef-tea and brandy is admissible. Vomiting is almost certain if the stomach is not empty at the time of the operation. The examination of the heart is a procedure only too frequently neglected. To be familiar with its action prior to operation is of great importance to the anesthetist both during and after the operation; for it gives him a criterion by which to judge its working during the anesthesia. Such knowledge for comparison often proves of inestimable value to all concerned, and often prevents unnecessary stimulation, anxiety and artificial respiration so frequently resorted to by the novice and to the inconvenience and often utter disgust of the surgeon. The condition of the kidneys as near as can be determined from the examination of the urine should always be ascertained. By this means we can often prevent the perils of anesthesia by being on our guard for danger which frequently arise when the urine presents evidence of pathology. In marked cases of albuminuria it is wise to use a local anesthetic, and if this is not practicable to postpone operation until the albuminuria has somewhat subsided under proper treatment. In cases of emergency our judgment should govern us. The presence of sugar in the urine is not to be considered a contra-indication to operation, although its presence must be considered as dangerous and this regardless of the amount present. With the presence of aceto-acetic acid the case becomes more alarming. The lungs should also receive their just share of attention, for here a bron-

* Read before the Greenup County Medical Society.

chitis or a tubercular involvement may result in an unhappy termination.

The anesthetist does well if he prepares beforehand the armament necessary to meet the common complications which at times arise during anesthesia; for when needed they are needed badly and promptly. The administration of morphine and atropine 20 minutes before the anesthetic is a method generally employed. By some this preliminary is thought to be a disadvantage rather than an advantage, but it is derivative of good results in selected cases.

Ether and chloroform are the two favorite anesthetics. Each has its place in surgery. Ether is by far the safest agent in general cases and is best given by a partially open inhaler. The drop method is the method of choice. This is nothing more than dropping the ether on the mask drop by drop until the stage of anesthesia has been reached. It should not be given too free at first. Too much at the start will cause coughing and strangulation. Once the patient is thoroughly anesthetized give just enough to maintain unconsciousness. The point of surgical anesthesia is reached when the patient feels no pain, breathing is regular and quiet, is not rigid, pupils react slowly to light and the color is good. Sudden dilatation of the pupils when the patient is thoroughly under the influence of the drug calls for prompt attention on the part of the anesthetist and the withdrawal of the drug. Taking the rate of the pulse and the respiration every ten minutes is a very good custom to follow. If the patient is not a very good subject this can be done every five minutes. By so doing we give the patient close attention and can often detect the beginning of complications which would otherwise be overlooked until they become of such a serious nature that they very often result fatally to the patient.

In giving chloroform care should be exercised from the start. The drug should be given gradually drop by drop and the heart watched carefully throughout its entire administration. The point should never be overlooked that chloroform is a dangerous agent during the first few moments of its administration; for this reason the anesthetist should proceed with caution.

In giving either chloroform or ether the anesthetist should give it his undivided attention. His task is a difficult one, and one which commands respect and bears considerable responsibility. His place is just back of the patient's head (at the helm so to speak) and like the pilot guiding his ship through a rough sea should remain there until the storm has passed. One cannot administer an anesthetic agent and be a witness to the operation at the same time. He must be one or the

other, but to try to do both solicits trouble and will eventually result fatally to the patient with all of its sad consequences.

REPORT OF A CASE OF RABIES.

By B. J. NEARY, Waverly.

Thomas Arthur French while playing in the front yard of his home was bitten by a dog supposed to be mad, but nothing of the dog could be found as the boy was too small to describe it. This happened on October 16th, 1914. His wound was dressed at the time by a local physician and nothing much was thought of it. I was called in on November 7th to see the child and after getting the above history and seeing the child take spasms and froth at the mouth, my mind was made up. Hoping I was mistaken in my diagnosis and that he might respond to some treatment, I was called back on the day following to see him die. They told me he had frothed considerably that night, he seemed to like to have the froth in his mouth and when it was wiped away he would cry out. He was in a continual spasm and was afraid to be left alone. And when he was given any water he would cry out and push it away. He would have a convulsion and would always froth at the mouth.

The mucus was of a yellow froth and had a very fetid odor.

He died on November 8, 1914, in a convulsion.

This case is of unusual interest from the short period of incubation death occurring twenty-three days after the bite. There are, however, some apparently well authenticated cases of development of rabies in man as early as ten days after exposure.

My diagnosis of rabies in the case was confirmed by the history of the dog. This animal bit the child and disappeared. In the furious type of this disease as manifested in animals, the dog may suddenly leave home, wandering off many miles. During this period of "running mad" he may bite many animals and persons. He bites and passes on but does not get out of his way very much to attack them.

Juvenile Deforming Osteochondritis.—Brandes reports ten cases with the Roentgen findings and remarks that the cases of supposed tuberculous hip-joint disease with recovery may have been merely cases of this comparatively benign affection, juvenile deforming osteochondritis. (See Journal A. M. A., May 2, 1914, p. 1444, abstract 174). Ankylosis does not seem to occur in this affection. He applied a walking plaster cast for two or three months, materially improving conditions so that afterward there was much less limp.

DUTIES OF A HEALTH OFFICER.*

By J. B. SCHOLL, Jabez.

If one will read Section 2055 of the General Statutes of Kentucky you will learn some of the duties of health officers. He is only the secretary of the county Board of Health, to do the writing and keep books, as may be directed by the county board, sanctioned by the laws of Kentucky and the rules of the State Board of Health.

The health officer is not a coroner, circuit judge, commonwealth's attorney, sheriff, nor magistrate. Some think that a health officer can just make a wink or motion and everybody that you don't like has to do just as he bids. A health officer as well as doctors are servants of the people aiding and instructing with might and main to help well people to stay well and help sick people to get well and prevent preventable diseases. It is an important duty and compulsory by law, for the family doctor as well as a health officer, to impress and urge upon the people not to go about with contagious diseases, however mild it may seem to you, for the milder the case the more apt a person will be to go about, and mingle with his neighbors and friends, and by so doing he will spread disease that did not hurt him, he says, but at the same time he probably will be the cause of many an untimely deaths. Oft-times because a person with a contagious disease is Mr. So-and-So's boy or girl or a cousin of Mr. So-and-So, goes about with some of those deadly preventative diseases and sometimes because a person lives in a white house with a stone chimney and he is a good neighbor, he and his family are permitted to go around and scatter diseases among the more unfortunate. If a person could live two or three lives we could afford to be more careless about contagious diseases, but as we only live once here, why not try to help yourself and neighbor to stop diseases.

How often have you heard echo and re-echo, bound and re-bound, in your ears what your faithful family doctor has told you about contagious diseases, when, if you had heeded and done as he told you, dear wife, dear father, dear mother, little Willie or little Mary could have been with you here to-day. Of course your family doctor has told you so often that it has become so common that a majority of the people get used to the same old song and don't do their duty after having been advised so often. You should have a regular family physician and take his advice, as quick or quicker than you would his medicine. Your family physician is not necessarily the closest doctor to you, for if you will take your family doctor's advice in

regard to preventative medicine the chances are that you won't need much medicine, as the advice he gives will do.

In regard to the doctor will say don't do as they do, but do as they tell you. Some doctors use tobacco, coffee, smoke and wear dirty collars and shirts and sometimes some parts of their pantaloons are worn threadbare from continual use and hard service, because you have not paid your bills, and I have heard and seen others that partake of some of the extracts of the "cereals" or "John Barley-corn," for the stomach's sake.

It is the doctor's duty to advise and instruct you about preventing disease, so please take their advice and help put disease, distress and suffering out of business I tell you, and I know they are your friends and friends to suffering humanity.

Did you ever stop to think for a moment what a doctor does? He is everybody's dog that will hunt with him. I have never seen one physically able to do manual labor to any extent, please pardon me, Mr. President, I wish to say that ordinarily whenever you see a good doctor you will see a gentleman and a Christian in the same hide. I believe I could tell a good doctor's hide in a tan yard, you know, Mr. President, that mules, doctors, women, preachers and flies are talked about and lambasted more than everything else, so I think I have a right to say what I have about them. This is a free-for-all discussion, so any person here has a perfect right to discuss the mule, doctor, woman, preacher and flies.

Other duties of the Board of Health and Health Officer is to say that you have no right to keep a filthy house, back or front yard, nor a privy, hog pen, chicken roost, old rotten wood, ponds, planks, boards, saw dust, nor anything else that is decaying or emits an unpleasant odor. If any of you have such about you it is a duty to yourselves and friends and neighbors to at once put them in a sanitary condition. If yours are all clean, in a Christian-like way speak to your neighbor about his duty and help him get his premises clean, for one filthy place may be the cause of all the preventable diseases, so it is the duty of all to see that these things are done.

It has been hinted that some of our villages, or small towns, have unsanitary privies and back yards. If this be true I believe if their attention was called to it, they would at once clean them up and keep them clean.

Now I would say that if Mr. So-and-So has such places around or about him, first notify him in writing that is is offensive, dangerous and a nuisance, and if he won't hear to this go before your magistrate or county judge and get out a warrant just as you would any other violation, and I will assure you the

* Read before a joint meeting of the Russell County Medical Society and Teacher's Institute.

courts will be with you and every doctor and health officer in the State.

As I stated at the outset, the county board and health officer is no court, nor peace officer. So if any of you have any nuisances go to your magistrate or judge and require them to help you get rid of it. One or two cases of nuisance tried before the courts, will show to the people that the Board of Health is no "Doctors' get-up" but actual law of Kentucky. The County and State Board of Health and physicians are always ready and willing to instruct you about sanitation. It is no money to the doctor to be here to-day to instruct you in preventing disease, for you ought to know we can tell you how to keep from being sick. That knocks some of us out of a doctor's bill and suffering for you.

In regard to medical society, will say that it is not to set or raise prices but is for doctors to meet and consult and advise together, and learn all we can about diseases. Now if your family doctor does not belong to a good medical society he is not doing you right, for a true doctor always wants to know any and all treatments for the sick and if he does not attend medical societies he may miss something for your benefit that would perhaps save or prolong your life.

Now the doctors here will tell you about sanitation, and cleanliness and disinfecting and fumigating your houses, etc.

Most public schools will probably begin Monday. I wish to impress on your minds that it will be unsafe, imprudent, unwise and criminal for the district trustee or chairman or teacher to begin school unless the house is put in good healthy condition by scouring, scalding and fumigating it before beginning and often afterwards.

I think there is a compulsory law requiring children from six to fourteen to attend school. If I were you and the little child I would positively refuse to go unless the school house, privies, wells and springs were kept clean and I would also keep as clean as I could myself and I would also require the teacher to keep clean. There is no law in this country to force a child into one of these death traps, so children I would move every notch, and I will help you all I can.

No law can force you to send your children to a school house that has not been thoroughly cleaned and fumigated and more especially if the water supply has not been examined to be sure that they are not drinking water polluted by the surface contamination which really means poisoned by the discharges of their own bodies.

We owe it to our children that they should have sanitary privies in the school houses.

A school should be for the protection of their health instead of a place where all kinds

of contagions can be contracted. Diphtheria is always an epidemic when school begins, this could be prevented if no child who has recovered from diphtheria was permitted to return to school until a swab was taken from its throat and sent to the State Bacteriological Laboratory and no diphtheria seed found.

Teach your children the value of typhoid fever vaccination so that we can stamp out this filthy disease.

If you or any member of your family have a cough which does not get well, have your spit examined free by the State Board of Health. If your children are pale and puny and are not learning as fast as you think they ought to, see that your family doctor has them examined for worms.

If your children breathe with their mouth open and have ear trouble, adenoids must be suspected and removed. Healthy children will make healthy men and women, and healthy men and women will help us to make Kentucky the greatest State in the Union.

A CASE OF TETANUS.*

By B. J. BOLAN, Glenfork.

On November 25th, 1914, I was called to see Mrs. W., age sixty who gave the following history.

Some two weeks prior to my visit while patient was getting down from the loft of an old-fashioned log barn, her foot slipped and in an effort to keep from falling her finger-ring caught on the edge of an old trough-like log in the wall, suspending her entire weight for a few seconds.

This resulted in a lacerated wound of finger, which by the use of ordinary home remedies did not heal.

Patient was complaining of soreness and stiffness of muscles of neck and jaw. These symptoms began about twenty-four hours before I was called and gradually grew worse until she was unable to open her mouth, protrude her tongue or articulate distinctly.

She said when first symptoms appeared she thought she had "caught cold" while helping her sister catch some chickens, (at night) to fry for a Methodist preacher.

She had a temperature of 101 degrees F., very rapid pulse, and seemed very restless. There was some twitching of muscles of face and blepharospasm. Said she had been having night sweats, this I attributed to absorption of toxic products from the necrotic tissue with which her finger was covered.

Considering her history and the symptoms mentioned, I made a diagnosis of tetanus (chronic type).

Treatment was begun by carefully trim-

*Read before the Adair County Medical Society.

ming away every particle of neerotic tissue and dressing finger antiseptically. Next I administered subcutaneously fifteen hundred units of anti-tetanic serum (not having a larger dose at hand.)

Next day through the kindness of Dr. Me-Chord, of Lebanon, I was supplied with larger doses (three thousand and five thousand units). This I gave subcutaneously every six hours, beginning with the larger doses, continuing in this way until the larger doses had been given.

Then I began administering the three thousand unit doses every six to twelve hours until I had given eighteen thousand units at the expiration of which time patient began to improve. Being able to swallow liquids from a spoon. Previous to this patient had to suck milk and water from a small piece of sterile gauze. There being one day (third) on which patient could not swallow anything, as any attempt at swallowing would bring on a convulsion. During this time we gave nutrient enema and normal saline per rectum.

In conjunction with the antitoxin we gave chloral, bromides and morphine to help control muscular spasms and produce sleep. I gave urotropin every six hours so long as patient could swallow. Fortunately patient's kidneys continued to functionate properly during the whole time of her illness, this greatly assisting in getting rid of the toxic products. Constipation was marked, having to use soap-suds enema to move bowels.

Tachycardia was a prominent symptom, pulse rarely being under 130 per minute, and many times 150 per minute.

Her mind being fairly clear during the whole time.

Opisthotonos in a more or less marked degree for four or five days. Extreme sensitiveness to peripheral irritations until the seventh day, when the whole scene changed. All tetanic symptoms having disappeared, patient being able to go about the house three weeks from first symptoms of tetanus. Finger rapidly healing.

Cosmetic Depilation.—Chilaiditi applies the Roentgen rays to the just sprouting hair and thus kills it. The hairs are pulled with sweeteners and, two or three days later, the papilla is exposed to the rays filtered through 3 mm. aluminum plus 5 mm. leather. He says that the papilla and the hair as it first sprouts are most susceptible to the rays during this period of intense growth. A single sitting answers the purpose. The dose must be about 15 Holzknicht units, enough to induce a just visible reaction of the first grade.

TRANSPOSITION OF VISCERA.*

(PRESENTATION OF CASE.)

By LEON L. SOLOMON, Louisville.

Patient, Chas. S., 45 years old.

Family History: Mother dead, cause unknown, when he was one and one-half years of age; father dead, cause unknown; sisters, three, dead, causes unknown; brothers, four, dead, causes unknown, except one brother, accidental death, while working in cement mill in Germany. No family history of tuberculosis, nervous disorders, nephritis, cancer or syphilis.

Previous Medical History: Walked late, not until three years old. Mumps, the only disease of childhood. Acute rheumatic fever at 14,—recovery complete. Running ear for three years at 16. Abscess in thigh at 17. Typhoid at 25,—recovery complete.

Cardio-Respiratory System: Has noticed some dyspnoea, on exertion, for 20 years. Never had any oedema of feet. Never has cough, except when he "has a cold." No history of night sweats or haemoptosis.

Gastro Intestinal: Appetite good; bowels, regular.

Genito-Urinary: Denies gonorrhoea and syphilis.

Surgical Operations: Hemorrhoids.

Personal: Has been a day laborer most of his life time; also janitor and, at times, an orderly in hospitals.

Present Illness: None. Comes to the hospital to present his "Transposition of Viscera." Patient had been told, when 18 years old, that his heart was on the wrong side and came to hospital to have it examined again. X-ray of thorax and abdomen shows complete transposition of viscera.

General Appearance: Well nourished, well developed man of about 45 years. No dyspnoea, cyanosis, jaundice or oedema. Consciousness clear. Apparently a normal man. No eruptions, anywhere.

Eyes: Pupils round, regular, equal, react quickly to light and accommodation.

Mouth: Tongue does not deviate—no malformation of palate or fauces; mucous membranes rather pale. Teeth, fairly good.

Lymphatics: No enlargement, except sub-maxillary.

Chest: Heart—Apex beat on right side in fifth space, one finger inside mammary line. No thrill. Dullness extends to mammary line on right side in fifth space. Does not extend beyond sternum on left. No widening in the first space. Heart sounds are regular in both

*Read before the Jefferson County Medical Society.

rhythm and force. The first sound, at apex, is strong.

Arteries, somewhat hard. The radial pulses are equal.

Lungs, resonsant and clear, throughout.

Abdomen: Liver—Relative dullness in fifth space, mammary line, on left side. Absolute dullness in seventh space. Edge of liver not palpable below costal margin. Spleen and kidneys not felt. Splenic dullness on right side. No normal masses or pulsations, detectable.

Extremities, well developed.

Reflexes, normal.

Genitalia: Nothing of note, except the right half of scrotum is lower than left.

The man is right handed.

Diagnosis: "Transposition of Viscera."

—See X-ray report attached.

FLUOROSCOPE EXAMINATION.

On fluoroscopic examination the patient's heart shows on the right side. The left diaphragm is higher than the right showing the liver must be on his left side. Examination of the stomach shows the pylorus on his left side.

Watching a Barium enemata enter the large bowel shows the sigmoid passing to his right side and going on to the cecum, which is on his left side. The entire gastro-intestinal canal appears normal, as to neoplasms and masses. (Signed) B. W. BAYLESS.

DISCUSSION:

Curran Pope: This is the fourth case of transposition of viscera that I have seen; one in Ward's Hospital for Paralyzed and Epileptic, in London, one in Vienna, the late Dr. Ouchterlony's case, and this one.

An interesting feature is that, in this case we have to deal with a malposition of viscera with probably a normal condition of the central nervous system. This man says that he has never had any tendency to left-handedness, nor is he unusually dextrous in the use of his right hand, which is usually associated with predominance of the left cortex. For that reason we would be led to believe that he has a normal brain with respect to the function of the left side, despite the fact that he has malposition of the viscera of the chest and abdomen. In two of the cases I have seen, if my memory serves me correctly, there was some disproportion between the functions of the two sides of the body, but in this case it seems that the brain is about equally developed insofar as the bony and muscular frame is concerned.

The case is an extremely interesting one, and I am very glad indeed to have had an opportunity of seeing it.

Leon L. Solomon, (Closing): I have nothing to add except to call especial attention to the fact, as brought out in this man's history, that he was

unable to walk until he was three year sold. Also the unusual number of deaths in his family, of which there have been seven. He is 45 years old and he is the only surviving member of his family. If there were any malformations or deformities in other members of the family, he does not know of it.

PETROSAL ABSCESS.*

By DUDLEY S. REYNOLDS, Louisville.

Petrosal abscess as a primary condition is so rare it may be said not to exist at all, excepting as a pathological curiosity.

It may be stated, that all abscesses are primarily due to the introduction of a ferment, a pathogenic micro-organism. The infection may enter from the middle ear, through one of the fenestra, or it may enter indirectly through the mastoid cells. It does sometimes happen that, necrosis of bone results from traumatism, from gummatons, tuberculous, or other sources of interruption of blood supply. These conditions, however, are not always accompanied by abscesses, yet carries sloughing, or exfoliation are conditions which may be called abscess.

The point I make is, that, necrosis of bone may exist before any abscess action, or actual disintegration take place, and the necrosis may not be the result of infection; in which case, the abscess is secondary to the causative process. Traumatism, obstructed nutrition, etc., may have produced death of a part before any kind of infection appears.

Otitis media of scarlet fever, diphtheria, variola, and other eruptive diseases, constitute the most frequent cause of petrosal abscess.

The symptom complex of labyrinthitis is so variable, occurring in the course of eruptive fevers, as frequently to escape recognition by the attending physician.

In some tubercular cases, and often in mella, rubeola, etc., the physician is not called until brain symptoms appear. In other cases, a neglected otitis media may have extended into the labyrinth and thence to the cerebellum. The patient is often said to have tubercular meningitis; and the aural surgeon does not see the case until a consultation has been called, and then it is learned the patient had long suffered from a discharging ear. The aural surgeon is then too seldom called before convulsions and coma have set in.

The great fundamental principle in the treatment of all forms of abscess is, free drainage. The next point is, to destroy the infecting agent; and, finally, to so stimulate the walls of the abscess cavity as to promote

*Read before the Jefferson County Medical Society.

the process of repair. Free and continuous drainage must be secured. The outlet of the abscess must, if possible equal the greatest diameter of its cavity. This, however, is not always possible. If the mastoid is not involved, it need not be disturbed, provided, a sufficiently large opening through the superior wall of the tympanic cavity can be secured.

With an abscess already in action in the petrosal bone, it is too late to try to save the labyrinth. It is unnecessary to indicate the steps of either of the two principal modes of entering the petrosal bone, through either the mastoid or the attic of the tympanum.

I can illustrate the subject better, perhaps, by the recital of a few clinical observations.

Case I. Mr. T. J. F., age 34 years, had suffered with a discharge from the right ear for several years. Various kinds of treatment had been employed. Finally, severe and continuous headache commencing in the occiput, and extending forward, incapacitated him for business. He came to Louisville and consulted me on February 10th, 1877. I found a sinus of three or four millimeters in diameter, leading upward and slightly backward from the tympanic cavity. The ossiculae were necrotic. The discharge was a mixture of foul smelling pus and blood. Cotton rolled on the end of a curved probe, and passed into the sinus, caught upon the ragged walls of the cavity. A solution of carbolic acid was carried into the cavity with a cotton mop, and in that way the process of cleansing was carried out. Use of the syringe which he had formerly employed, was urgently condemned, and discontinued.

At the second consultation, I enlarged the entrance to the cavity with a small gouge; and, having cleansed it as well as I could with the carbolic acid solution, I passed in a quantity of cotton, saturated with a solution of iodine in glycerine, one drachm to the ounce. This was permitted to remain until the next morning. By this time the odor had somewhat diminished, and the discharge had almost ceased. This plan of treatment continued without interruption for about three months, when the cavity had almost entirely filled up by granulation. I then packed in a bit of cotton carrying a large amount of the ointment of the yellow oxide of mercury, made from the formula of Pagenstecher or four days this pack was removed; and, after wiping out the cavity, another application (now official in the U. S. P.). After three of the Ointment was made. In about two months more, say five months from the beginning of the treatment, the patient was well. The hearing, however, was lost.

He continued free from trouble from July 30th, 1877, to May 21st, 1890, when he returned with crusts in the attic depression.

After removing these crusts, a small fistula was found, discharging a watery fluid, which was not affected by inflation of the tympanum. A small flexible probe wrapped with a quantity of cotton wool, dipped in carbolic acid, was passed into the sinus, or fistulous opening. A few treatments of this kind at intervals of about a week remedied the difficulty.

On the 9th of December, 1893, he returned. After removing the crusts, an excoriated surface about the size of a pinhead was observed in the roof of the opening above the tympanum. A small cotton mop on a flexible probe, carrying a solution of iodine, one drachm to the ounce of glycerine, was applied daily for twenty days, when the trouble seemed to be entirely cured.

In May, 1896, he returned again with a relapse. This time a perforation in the anterior superior quadrant of the membrane was found, with a muco-purulent discharge from the tympanic cavity. This was treated by local applications daily, for twenty-two days, when recovery seemed complete.

He remained well until January 16th, 1912, when he returned with a cholesteatoma, which I scraped out and treated locally until April 28th, 1912, when he seemed to be well.

I see him frequently, and he remains in apparently perfect condition. The cicatrized surface is clean and smooth. Valsalvan inflation causes the membrane to bulge promptly, and there is about the normal amount of cerumen on the walls of the external canal.

I give the history of this case more in detail in order to show the course of such chronic cases. It is a type of a class.

Case II. Sister A., of the Ursuline Order, came June 1st, 1890. She had a discharge from the left ear for many years. During the past month she had suffered vertigo, which had grown worse, until, in turning round suddenly, she fell. She was suffering with tinnitus, and complained that she could hear water dripping. Removing a quantity of foul crusts from the ear, a polypoid mass filled the bottom of the canal. With a probe armed with a small amount of cotton at the end, it was easy to locate the pedicle of the polypus in the roof of the tympanum. Applications of carbolic acid first, and subsequently chromic acid, destroyed the polypus, and revealed a ragged ugly opening in the roof of the tympanum. The malleus was so far decayed as to enable me to remove the remains of it without difficulty. I scraped away a quantity of necrosed bone from the roof of the tympanum, and let out about four drops of cream colored pus, of very foul odor. Daily cleansing the cavity with a probe and cotton wool, sometimes carrying carbolic acid, and sometimes a solution of permanganate of

potassium, was used for about two months. After the offensive character of the discharge had been remedied, I made applications of the standard iodine solution, daily, with a probe. About December 1st, 1890, the discharge had ceased entirely, and the process of repair so far advanced that, a smooth excavation near one-half inch in diameter, and about five-eighths incl. in depth, remained. The hearing had been lost in this ear before I saw it. She has never had any return of the trouble.

Case III. A little girl nine years of age had otitis media, with a constant discharge of mucopus, which was treated by the family physician until July 4th, 1897, when the boys exploded some fire-crackers near her, which she said knocked her down. Her mother explained that the child was unable to walk without assistance for the next two weeks. She had gradually improved, and at the time I saw her, September 1st, was suffering a very constant and profuse discharge from the right ear. I cleansed the cavity and made the best examination I could, but she was refractory, and would not submit to treatment. Her mother brought her occasionally to the office, and sometimes remained as much as a week, allowing me to treat her every day. There were no indications of mastoid involvement, and I cleared out the cavity, which extended upward and slightly forward from the roof of the tympanum. I treated her occasionally from time to time in this way, until finally I decided not to see her again unless she would remain until I discharged her.

In April 1901, she returned to submit to whatever treatment I might see proper to administer. I made daily applications with a mop of cotton wool, occasionally dipped in a solution of permanganate of potassium, five grains to the ounce of water, and afterward, in pure carbolic acid, until the discharge was no longer offensive in odor. Then I made daily applications of the standard solution of iodine, until November, when she returned home. I afterwards saw her once a week until the middle of January, 1902, when she was apparently well.

She returned again January 2nd, 1904, with bulging of the superior wall of the tympanum. I cut out a section, including the bulging part, and evacuated two or three drops of pus, followed by a discharge of bloody serum. Daily treatment with iodine solution, with an occasional application of carbolic acid, soon terminated the trouble, and in about four months the wound was healed, and she has never been troubled since.

Case IV. Sister E., of the Ursuline Order, aged 19 years, came September 2nd, 1894, with an attic abscess in the right ear, having two small openings, one directly above the

short process of the malleus, and one just posterior; the space between them being about two millimeters. Passing a small flexible probe carrying pure carbolic acid, on cotton, into each of the openings, and then applying it well to the surface above, I cut out a section so as to open the cavity. The treatment for about two weeks was of the kind already described in the other cases, when suddenly pain and swelling over the mastoid supervened. I then removed almost the entire mastoid bone, so as to include the entire pneumatic portion, and ventured into the petrosal bone as cautiously as possible, aiming only to secure a large common outlet. Regular treatment was administered for five or six weeks, maintaining the drainage both externally and through the auditory canal, when she seemed to be recovering. Irregularly, during the remainder of the year, applications of the standard solution of iodine were made. In this infirmary she had been instructed in the art of cleansing, so that she took daily, a dropping glass, such as is used for medicating the eye, and squirted into the mastoid opening about one-half drachm of the solution of permanganate of potassium, 5 grains to the ounce. After the first of the year, 1895, I saw her at intervals of ten to fifteen days. Finally, the mastoid opening was allowed to close. The petrosal opening through the roof of the tympanum remained patent, and continued to discharge a seropurulent fluid. At times the discharge almost ceased, and granulating processes appeared to be filling the cavity.

About the 1st of August, 1895, she had convulsions, and the opening above the mastoid was renewed. A large amount of necrosed temporal bone was scraped away, leaving the dura exposed at several points. The necrosis rapidly extended upward and forward, until apparently more than one-half of the temporal bone had perished, when she suddenly developed an extensive meningitis, and died.

It remains a question to be decided in each individual case, as to whether the mastoid shall be disturbed, unless there are clinical evidences of its involvement.

I am led to suppose the greatest importance attaches to the earliest possible establishment of an adequate outlet for any disintegrating or infiltrated tissue, affecting the tympanum, mastoid, or petrosal portion of the auditory apparatus.

In the very nature of things an abscess will burrow in the direction of the least resistance, but in some cases necrosis seems to spread into contiguous bone without apparent cause, other than interrupted nutrition, or possibly through small lymph channels.

DISCUSSION:

S. G. Dabney: The title of Dr. Reynold's paper struck me as being rather unusual, and it seems to me that the cases related, with the exception of one or two, were what are commonly called diseases of the attic. Petrosal abscess is a term that is very infrequently used. I can see how it might be applicable to diseases of the labyrinth. Nystagmus, for instance, is a symptom that has been ascribed by practically all writers on the subject, to labyrinthian trouble.

One point that he brought out that is worthy of consideration, is the fact that many cases of abscess of the brain develop from mild involvement of the middle ear.

W. C. Dugan: I believe that where there is diseased bone, in any part of the body, and especially in the head, that individual is existing over a smoldering volcano, so to speak, and it is not surprising that meningitis often develops in these cases. Therefore, I believe they should be operated upon and every vestige of necrotic bone removed. I recall a case in which there was a small area of necrotic bone in the supra-tympanic space; or attic, referred to by Dr. Dabney. This patient had been unconscious for forty-eight hours when I saw her. She presented no external symptoms of the trouble, but upon pressing deeply over the mastoid, the only evidence of reflex was manifested by a frowning of the face. A tentative diagnosis of trouble in the mastoid region was made, and operation revealed a small area of necrotic bone in the supra-tympanic space, which was removed and the patient promptly recovered. I am quite sure this woman's life was saved by the bold measures instituted to locate the trouble and remove it.

Dudley S. Reynolds, (Closing): I have but a word or two to say in closing.

Referring to Dr. Dabney's remarks, I took pains to say in the course of my paper, that I would not consider the symptom complex of labyrinthitis, of which nystagmus is one of the conspicuous manifestations.

As to Dr. Dugan's idea of scraping out and removing all areas of necrosed bone, I fancy that he would scarcely follow this procedure in the petrosal bone. The petrosal bone is cone-shaped and does not always lie in exactly the same relation to the external ear. Furthermore, it contains so many canals, so many sinuses, so many important nerves, that it is a very delicate and difficult matter to get in between these vessels and nerves with any scraping apparatus, and I consider it very dangerous. Again, there is the possibility of extending the disease into the semicircular canals, when it may not already have reached that far. Therefore, I think the plan suggested, of dissolving out these areas of necrotic bone with iodine solution is the only safe and practical way of dealing with it.

W. C. Dugan: It seems that Dr. Reynolds mis-

understood my remarks. I did not mean to advocate scraping out these areas of necrotic bone. I take a chisel and mallet and remove it. I do not fear injuring the jugular vein. Even if we do open it, no particular harm is done; it simply means hemorrhage for a minute or two.

CALOMEL, ITS USES AND ABUSES.*

By W. E. ALLEN, Shelbyville.

My principal, and indeed only excuse for perpetrating this exceedingly commonplace paper upon a very commonplace subject, is that we may have a program and thereby furnish the incentive for a discussion, which same discussion will, I sincerely hope, prove of more benefit to all of us than the paper. With this explanation clear in your minds, and the thought taken therefrom that I am reading this with the intention of adding to your store of knowledge on this important subject, I will get down to business.

Calomel as you well know is but one of the many preparations of hydrargyrum, or mercury, being the mild chloride in contradistinction to the bichloride or corrosive sublimate, familiar to us as a very efficient antiseptic and a favorite agent with the laity for shuffling off this mortal coil.

The dose of calomel ranges all the way from the tiny 1-10 grain pellets for the "infant mewling and pewking in his nurse's arms" to the huge 20 grain doses given in conjunction with compound jalap powder to remove the accumulation of fluid in ascites. Between these two extremes its uses and indications are probably more numerous and varied than are those of any other drug, in or out of the pharmacopeia.

Calomel is used both internally and externally and I was about to add, eternally.

With the possible exceptions of quinine in malaria and the bichloride in syphilis, calomel comes as near being a specific as any drug we have, when properly indicated and administered. When calomel disappoints us it is time to revise the diagnosis.

This drug finds its greatest field of usefulness in disorders of the intestinal tract, in that peculiar combination of symptoms diagnosed by the laity as "biliousness," but known to us as autotoxemia, calomel is truly a specific. Were the liver guilty of one-half the faults attributed to it by the laity, it would give up in despair. Nearly every ailment that human flesh is heir to, is by them, attributed to the liver "not acting properly" whatever that is, and their favorite form of self-medication is to take a crack at it every

*Read before the Shelby County Medical Society.

once in a while. They seem to think that the liver is a kind of mechanical arrangement of rods and valves and exhaust pipes and carbureters and they go at treating it much after the fashion of scraping carbon from the motor of an automobile and sad to relate, they do sometimes get results. Of course when they tell us about it afterwards (as they love so well to do) we look wise and speak of toxemias, putrefaction and absorption of toxic products but you can't fool them, they know better, it was all caused because their liver was sluggish and not acting properly, and after you got it roused up, etc., etc.

Our ideas of the action of calomel have undergone quite a revision in later years as the result of laboratory experimentation, we are told to no longer regard it as a self-starting system for the flow of bile, that it is a slow and unsafe purgative and that it slightly, if at all inhibits the growth of bacteria in the intestinal tract and that there are agents greatly its superior for these conditions and then proceed to spoil it all by telling us to be certain to prescribe these greatly superior preparations in original packages with the wrapper and all on to avoid substitution but in reality to let the patient know what he is taking and why he is taking it so that next time they or their friends are sick they won't have to disturb the busy doctor for a diagnosis and prescription for doesn't the enterprising manufacturer put both on the bottle in plain English and French and German too for that matter, but I'm getting a long ways from Tipperary.

In spite of all the test tube evidence to the contrary we go on giving calomel and go on getting uniformly good results with an occasional case of salivation to remind us that to err is the part of the human doctor and to forgive him the divine prerogative of the patient.

One reason I believe for the success of calomel is that we have found that practically all diseases, no matter what their nature or location, are benefitted by a preliminary emptying of the intestinal tract, and while we cannot hope to render sterile thirty feet of infected gut with the intestinal antiseptics now at our command yet we can mechanically remove the contents and thus take out bodily a good many million bacteria, and for lack of a subtle pabulum, reduce the vitality of the remainder. Even typhoid fever is benefitted by an initial course of calomel, if given before ulceration has progressed very far.

In the summer diarrhea of children, calomel and castor oil will cure nine out of ten cases and benefit the tenth, of course its use is contraindicated in the later stages.

I believe that one reason we do not get the results from calomel that we think we are en-

titled to is that the mother or some one else has been giving it indiscriminately before we see the case, but if we are allowed to give it first and in our own way and dosage, rarely indeed does it disappoint us.

Calomel would seem to bear out the contention of our homeopathic brethren in the law of *similia similibus, curantur*, for when given in minute doses for persistent vomiting and nausea it will relieve these conditions very promptly when other measures have failed, yet nothing makes one any sicker than a dose of calomel.

This drug has considerable reputation as a diuretic though I have had no experience with it for this purpose.

At the last meeting of the Kentucky Midland Medical Society, held at Lexington, I heard of, to me, an entirely new use for calomel, it was in flux and dysentery (not of the amoebic type). Two eminent physicians of the city of Lexington said they were in the habit of giving 20 and sometimes 30 grains at a single dose and that the results were marvelous. Personally, I would hesitate to give this dose to a patient, unless, perhaps, his account was considerably in arrears and I would enjoy losing his practice.

We occasionally find a patient with an idiosyncrasy for calomel, and quite a number tell us they just simply can't take it, that it would kill them, so we give them the submuriate of hydrargyrum and lo, it acts fine, for do we not read that: "The Simple Simon whom calomel would slay, will thrive under the treatment, of hydrargyrum chloride mite."

Externally, calomel, either alone or in conjunction with other drugs has a wide field of usefulness, though in later years it has fallen into disuse, just why I am unable to say, for in some conditions its use was attended with uniformly good results. Calomel and lime water in the form of the celebrated black wash was formerly a favorite application to syphilitic sores and calomel and lard or vaseline makes an excellent stimulating application to indolent ulcers and in eczematous fissures seen in children in folds of the skin, especially behind the ears. Calomel and castor oil has considerable repute in pruritis ani to relieve the terrible itching so peculiar to this trouble.

And, illustrating its varied uses, it was formerly used quite extensively in conjunctivitis of the chronic variety. Care had to be exercised not to give the iodide of potassium at the same time for fear of forming a deposit of the insoluble iodide of mercury. A favorite treatment for the conjunctivitis of horses is to fill a goose quill with calomel and blow it into the eyes though care had to be exercised that the horse did not blow first.

Calomel is an ingredient of several of the cancer pastes.

These, gentlemen, are but a few of the uses of this well known drug and I wish to add by way of apology that they were written without reference to any text book, had time permitted my reading up on this drug you would have had to listen to a longer if not more interesting paper. I thank you.

POST OPERATIVE INSANITY WITH SPECIAL REFERENCE TO OPHTHALMIC CASES.*

By ADOLPH O. PEINGST, Louisville.

Although mental disturbances following surgical operations have been described as early as the sixteenth century, the literature until very recently contains only occasional meagre case reports with nothing definite to lead to a classification of these cases.

Perhaps the most comprehensive symposium and discussion on the subject ever held in this country, is the one held before the College of Physicians in Philadelphia in 1910¹ in which such men as Weir Mitchell, Dercum, Howard Kelly, Edward Martin, E. N. Brush and others participated.

Clinically these post operative psychoses do not constitute any special morbid entity and no one form of derangement can be considered characteristic of the insanity following surgical procedures.

They also have a rather complex pathogenesis—the disturbing factors having been variously attributed by different authors though all agree that in most of them there is a predisposition, either hereditary or acquired.

The earlier writers looked upon the mental disturbances following surgical operations as the result of the shock incident to the operation. Others saw in the mental anxiety before and after the operation and the coincident physical and mental exhaustion, the cause for derangement. With the introduction of anesthesia and antiseptic measures into surgery the new hypothesis was advanced that the nervous system is poisoned by the anesthetic or by the antiseptic agents, and that this accounts for the development of the mental symptoms. Iodoform was believed by the advocates of this theory to be especially prone to bring on psychoses. Other surgeons looked upon the loss of blood as the etiological factor, while some believed that the administration of the anesthetic created a disturbed intracranial circulation and that this had to do with the induction of the psychic disturbance. The prolonged use of alcohol or more especially the sudden abstinence from alcohol, and

former syphilitic infection were also given a place among the supposed causes.

It has only been in late years that attention has been called to the relation of diseased blood vessels and kidneys to the psychic disturbance. Practically all of the late writers on the subject lay stress upon the fact that such a relation exists.

Most psychologists agree that disturbed mentality in the aged rarely occurs except in the presence of arterio-sclerosis and usually of diseased kidneys, the blood supply to the brain being lessened by reason of the hardened arteries.

This hypothesis is upheld by the observation that the psychoses are very much more frequent in old individuals, in whom there is always more or less arterio-sclerosis and in whom affections of the kidneys are more common, than in the young. It has also been noted that many of the younger subjects in whom psychoses—post operative or otherwise—have been observed, had sclerosed blood vessels with or without renal trouble. Orthman² recently reported cases of psychic disease in patients from 20 to 30 years old in whom there was a marked arterio-sclerosis.

The French look with favor upon the view that the accumulation in the blood of toxic products, the result of renal insufficiency, are responsible for the mental affection³.

Regarding the operation itself it is believed by most observers that this acts merely as the determining factor in a subject already predisposed by a mental exhaustion and lessened power of resistance just as severe shocks and fright have been the fulminating causes of a disturbed mentality in predisposed individuals.

The question whether the derangement can occur after an operation in an individual previously of perfectly sound mind or whether these patients are always mentally deficient before the operation, is yet unsettled. However the belief is growing that it never occurs except in individuals with a predisposed mental instability.

Regarding this question I quote from a discussion of Edward Martin⁴ as follows: "We do not recognize that a perfectly healthy individual in good physical and mental health can become insane by any form of surgical intervention practiced in the present day."

Judging by case reports it is apparent that mental disturbances follow operations upon the eye more frequently than they do operations upon other parts of the body. Next in order of frequency they follow gynecological operations and operations upon the genital organs. Experience shows that they may occur after operations and injuries at any part of the body.

That the severity of the operation also does

*Read before the Jefferson County Medical Society.

not stand in any causative relation with the development of psychoses, is evidenced by the frequency of disturbances after operations upon the eye, which as a rule are not severe.

Just why ophthalmic and gynecological operations and surgery of the genital organs should favor the development of psychoses more than operations elsewhere has not been explained. Possibly the apprehension about the organs of sight and reproduction and the modesty regarding the female organs may be looked upon as the explanation.

Owing to the meagre literature on post-operative psychoses and especially to the fact that the cases do not conform to any one type, the frequency of their occurrence is yet in doubt. Kelly⁵ reports one case of insanity in every 400 operations in 16,000 surgical cases and in his discussion quotes Werth's statistics as 6 in 238 laparotomies and Urbach's as 5 in 106 operations for gall stones.

DeCosta in his discussion before the College of Physicians⁶ says, that in 1,000 laparotomy cases, four will probably go insane.

In an endeavor to obtain more definite figures regarding the frequency of insanity after surgical work, I have written some of the leading general surgeons in the States for the percentage of such cases seen in their practice and will read from their replies that which has bearing on this question.

John B. Deaver says: "I suppose I have had my share of post-operative insanity, but I could not possibly tell you just what per cent. My experience is that they get well."

Chas. H. Frazier writes: "I cannot recall one case of post-operative psychoses or insanity in my operative experience. I am speaking only from memory, and could not give you an exact statement unless someone were employed to go carefully over my case records."

From C. H. Mayo's letter I quote as follows: "In our work at St. Mary's hospital we had one such case many years ago and there might have been a second mild one, but the percentage is so low that it is negligible."

From A. J. Ochsner's reply I take the following: "I have not had my cases of post-operative psychoses classified independently so I cannot be entirely sure of the number of cases that I have had. I recall three cases out of some 34,000 patients that I have operated upon, which would make less than one-tenth of one per cent."

John B. Murphy writes: "I would say that I recall only three cases of post operative insanity in my experience, and have not seen a case now for the last fifteen years. It is therefore rather difficult to give a percentage on that number, as you can see it involves my whole surgical career. The first one occurred when I was an interne at Cook County Hos-

pital, and the last one about fifteen years ago."

In a total of approximately 45,000 surgical cases of seven of our local surgeons insanity was observed eighteen times, or once in every 2,500 cases.

The nature of the mental disturbance consequent upon an operation differs, though most cases have been placed by the psychologists under the category of "acute hallucinatory or confusional insanity." These patients, through an exhausted nervous system, become more or less delirious, the most frequent symptoms of which are hallucinations, usually ocular or aural, and the resulting delusions. They usually suffer with restlessness, insomnia, depression and a change in their entire disposition. In the more marked cases there is a decided confusion of intellect. These subjects pass into a state in which there is a clouding of consciousness in which they seem unable to realize their whereabouts or condition, spoken of as disorientation.

The view that post operative delirium may occur in individuals with perfectly sane minds, as a result of great exhaustion, infection, or intoxication, is held by many, yet from the symptoms described in these cases such as incoherent speech, hallucinations, etc., they do not differ from the cases described by most authors as acute confusional insanity.

Krafft Ebing⁷ like Wunderlich and others, looks upon these transitory post operative derangements, the cases spoken of by some as post operative delirium, as genuine cases of insanity. The patients become excited and talkative and after sleepless nights, become more quiet during the day. During their period of excitement they cry out and sing—and tear their bandages, etc., just as they do in the more marked cases but after a few days they usually return to normal. Death may occur in these cases—the patient dying of exhaustion in from 3 to 5 days.

Koppen⁸ looks upon the hallucinations, the lessening of symptoms during the day with at times, partially restored mentality in the early days of the disease as characteristic of this form of psychoses. There is no emotional exaltation as it occurs in mania or depression as it occurs in melancholia.

In point of frequency acute mania stands next to the acute confusional insanity as a complication of surgery. In the confusional cases the psychic process may increase until there is a pronounced involvement of consciousness and the development of maniacal impulsive acts of various kinds.

The patients are nearly all possessed with delusions—often of a desultory nature. Contrary to such cases post operative mania may also occur primarily. The maniacal symptoms may be followed by symptoms of maniac

depressive insanity or melancholia, another form of psychic disturbance known to follow surgical operations. These cases are characterized by marked mental depression, a desire on the part of the patient to avoid people, an apprehensive state of mind and above all delusions of fear or trouble or of sin, the nature of the delusions varying with the individual. These cases nearly always have the delusion of being persecuted. Many of them have suicidal tendencies.

Cases have frequently been observed in which a mild mental confusion followed immediately after operation in which the patient becomes apathetic and depressed, showing a persistent desire to change his surroundings or where there is a morbid desire to return home, both of which are relieved by change of environment or by allowing the patient to return home. Such cases could hardly be classed as cases of insanity.

However, aside from these mild cases of temporary mental exhaustion, all of the cases of disturbed mentality characterized by delirium, hallucinations, delusions, maniacal or melancholic symptoms, including the mild cases of confusional insanity many of which do not need special institutional psychopathic treatment, can rightfully be classed as cases of true insanity.

Presumably this is the view held by Howard Kelly, DeCosta, Werth and others, whose percentage of post operative derangement is much higher than that of other operators.

There is considerable variations in the time that symptoms of insanity appear after the operation, most of them developing from the 2nd to the 10th day. Exceptionally these symptoms begin a few hours after the operation, especially in the transitory cases described as post operative delirium. The duration of the psychic disturbance also varies, many of the confusional or hallucinatory cases returning to normal in several days. Most of the more severe cases of this kind and the maniacal and melancholic cases return to normal in several weeks. Exceptionally the derangement lasts for several years, some passing into the chronic state of the paranoid. Statistics would indicate that most of the cases of confusional insanity recover but that from 40 to 50 per cent of cases, which show symptoms of mania or melancholia remain permanently deranged or die as a result of the psychic disturbance.

The treatment recommended by surgeons who have had experience in these cases is, primarily of a prophylactic nature. The patient's mind should be gotten into as tranquil a condition as possible. He should have full confidence in the surgeon who should disabuse him of the idea that he is to undergo an operation of a serious nature. The anesthesia

should be given under the most natural condition, removed from all extraneous noises such as the moving about of nurses, conversation of physicians and assistants, etc. His surroundings after the operation should be as pleasant as possible, and if addicted to the use of alcohol or drugs these should not be withheld. After the development of the symptoms, bromides, hyoseine, morphia and heart stimulants have been employed.

Illustrative of our subject I wish to report two cases of psychoses following cataract operation.

Case 1. Male, mechanic, 67 years of age with senile cataract in both eyes, was operated on the left eye at his home on January 28, 1904. A simple extraction was done under cocaine anesthesia, without a complication, the patient being unusually tractable. Both eyes were bandaged and the patient put to bed. The patient was a man of family. His habits were good, having never been addicted to the use of drugs or alcohol, and he was apparently in good general health. He was intelligent and had never shown signs of mental weakness. There was no specific history. He had had nothing to cause him to worry but seemed anxious about having to undergo the operation on his eye. His blood vessels were atheromatous, heart and lungs normal, urinalysis negative.

The wound healed without incident, the patient having a black, round reacting pupil with vision 20-20.

Three weeks after the operation the patient began to have visual hallucinations. He would speak of seeing objects and individuals not present. He also had aural hallucinations and would do as though he were answering the telephone. When out of bed he went through drills of a soldier as he had when in the army. He was peculiarly sensitive about having anyone watch him and would go through his maneuvers when he believed he was not being watched. Four weeks later he was treated at a private sanatorium, where symptoms of melancholia were recorded, with delusions of failing business. He suffered with insomnia and refused nourishment. He remained at the institution until Jan. 12th, 1906, with some improvement in symptoms. Upon returning home he continued to improve and for a time was apparently normal, but after several months his symptoms returned. He died of senility, three years after operation, never having fully recovered his mental balance.

Case 2. Male, farmer, 76 years old, was operated upon left eye for senile cataract, at the Louisville City Hospital, March 13, 1914, after having been blind for 6 or 8 months. An extraction with iridectomy was done under cocaine anesthesia, the lens being delivered

readily without complication. Both eyes were bandaged and the patient put to bed in the corner of the ward where he had a subdued light. The previous history of this man was negative. His general health had been good, there had never been any symptoms of mental disturbance, although his wife stated that he had always been very hot headed. There was no specific history. He was an habitual consumer of considerable whiskey daily. There was no history of a drug habit. Heart and lungs normal. His urinalysis was negative. His vessels were markedly atheromatous. His pulse was arrhythmic losing a beat at times, then several, etc. He had lost the other eye 20 years previously through injury, the eye showing a complicated cataract, with total loss of function.

This man began to show signs of disturbed mentality about 24 hours after the operation. He became very restless, pulling at his cover, raising his legs and moving his arms about his head. He got up out of bed several times before a special attendant was placed on duty. When I saw him about 76 hours after the operation, he had torn the bandage from his eyes and had twisted it about his neck. The bandage was left off of both eyes and the patient removed to a private room with good light and under the care of an attendant. Instead of being improved by next morning, he was considerably worse. His restlessness continued, he was tossing about in bed and had to be restrained from getting up.

He had developed the delusion that he was going to die and was making bequests of his wearing apparel to the members of his family. Although he talked a good deal in a muttering way, no comprehensible replies could be obtained to questions put to him.

He was put on bromides, and chloral but with little improvement. Whiskey was given him regularly from the day of the operation. He refused nourishment from the beginning and with an increasing weakness of body and corresponding weakening of pulse, notwithstanding efforts at feeding and heart stimulation, the patient died of progressive exhaustion two and one-half weeks after the operation.

It might be of interest to note that notwithstanding the unprotected condition of the eye and the restlessness of the subject, the wound healed and he had a beautifully black pupil, which would have given him practical vision.

In addition to these two cases from my own practice, I can cite two others, seen eighteen years ago during my service as house surgeon in one of the New York Infirmaries.

One case represents the type of acute transient mania which sometimes follows eye operations. It occurred in a man about sixty

in whom a senile cataract had been successfully removed, both eyes bandaged and the patient confined in a dark room as was the custom at that time.

Twenty-four hours after the operation, following several hours of restlessness, patient suddenly developed an acute mania, getting out of bed—tearing his bed clothing, smashing the wash basin and tearing the pictures from the walls. I was in the house at the time and with the assistance of the orderly managed to get the patient to bed. The bandage was removed and some light admitted to the room. Almost immediately the patient became more calm, and in several hours had returned to normal.

Another case seen at this time has been reported by Dr. Herman Kuapp* and represents the type of melancholia characterized by suicidal tendency.

This case, a woman of about 50 years, in whom a successful operation for cataract had been done, and who notwithstanding the recovery of her vision and the absence of anything to account for a mental unbalance, showed signs of melancholia soon after the operation, and on the 14th day when she was about to leave the infirmary, finally killed herself by throwing herself over the banisters of the infirmary stairs.

The first of my own cases was a clearly defined case of post operative melancholia while the second case represents the most common of the post-operative psychoses, an acute hallucinatory or confusional insanity.

For a long time ophthalmologists believed that the cases of delirium following operations upon the eye were due almost entirely to the confinement of such cases in dark rooms and to the custom of bandaging both eyes, hence they were spoken of as *dark room psychoses*. However experience has shown that cases kept in light rooms without bandages develop mental conditions just as they do when the eyes are bandaged, though less frequently. It was also believed for a time that many of the cases following ophthalmic surgery were due to the physiological effect of the atropia used after cataract operations. This hypothesis has long been abandoned for it was found that the same psychic symptoms occur after general surgery and after ophthalmic surgery in which atropine was not employed as in those eye cases in which atropia was used. Instances are on record where the psychic symptoms began while the patient was in the hospital awaiting the operation before treatment of any kind had been given.

Contrary to the cases of insanity developing after operations some authors report cases in which an operation for cataract had a beneficial influence on individuals with unstable nervous systems. Cases of this kind were re-

ported by Becker¹⁰ who observed cases of hallucinatory psychosis and of acute melancholia which were cured by successful cataract operation. Moulton¹¹ reports a case of melancholia cured by the enucleation of an eye. Other operators report cases where operation upon deranged individuals failed to bring about a cure of the nervous affection.

The opinion of ophthalmologists regarding the etiology of post-operative psychoses now coincides with what has been said regarding cases in general.

Relative to the etiology Dr. F. X. Dermum, in a recent personal communication says "that the confusional symptoms following operation for cataract in old individuals when established are sometimes quite persistent and that it is quite probable that this susceptibility is the same as that which obtains among old persons with regards to other operations, especially if in addition to being senescent they suffer especially from arteriosclerosis or from contracted kidney or have been victims of prolonged alcohol poisoning."

In speaking of the cases of transitory delirium which perhaps are more common than the cases of longer duration and severity and which are so frequent after cataract operation, Krafft-Ebing¹² says: "The transitory deliria mainly accompanied by frightful hallucinations that occur in some instances where eyes are merely closed, in patients who are shut up in a dark room or in patients that have been operated upon for cataract and other eye diseases are mainly due to the effect of fright. In my experience in such cases we have to do with individuals that are imbecile, abnormally excitable or those weakened by old age, alcohol or other depressing influences." As most of the recent cases of delirium following extraction occurred in patients who were not kept in the dark and whose eyes were left unbandaged the etiological relation between the patient's environment and the development of mental disturbance may be questioned.

The exclusion of light and confinement of the patient are more probably only contributory predisposing factors, just as mental worry, syphilis, alcoholic abuse, previous unsound condition of nervous system, etc., are considered indirect causes of post operative delirium.

The fact that old people confined in infirmaries or rooms for trivial affections not infrequently develop delirium, has led Furstner¹³ to conclude that senility or more properly the constitutional changes incident to old age, as arterio-sclerosis and renal diseases are the most potent factors in the development of mental disturbance after ophthalmic operations. Koppen¹⁴ looks upon the degeneration of the blood vessels and the albuminuria as

the most important causes and believes that the resulting anemia of the brain and the toxic elements in the blood bring about changes in the mental condition so that it takes but little such as a cataract operation, which is attended with little or no shock, to serve as the exciting cause that brings on the active symptoms.

Contrary to what has been said of surgical operations elsewhere, the nature of the ophthalmic operation does influence the frequency of post operative psychoses, case reports showing that with but few exceptions they follow the operation for senile cataract.

Until recently it was believed that this was not due to the nature of the operation itself, but to the fact that after the operation for cataract both eyes were usually bandaged and the patient kept in dark rooms for several days.

This seemed especially convincing in view of the fact that ophthalmic operations in which no dark room after-treatment was employed such as iridectomy and enucleation of an eye, were only occasionally followed by mental derangement.

The nature of the psychic disturbance following operations upon the eye does not differ from that described following operations upon other parts of the body.

It was thought for a while that those cases in which a temporary mild delirium follows the operation, were characteristic of ophthalmic surgery, or more strictly speaking of cataract operations, but it is known now that such cases develop after other operations, although much less frequently than after eye operations.

Seventeen years ago Schmidt-Rimpler, in his text book on diseases of the eye said "those cases in which patients who are confined in dark rooms after cataract operations occasionally develop symptoms which were formerly designated as delirium. The chief characteristic of these psychoses is the mental confusion and an inability to find one's bearings, and he believes that if we regard primary insane conceptions or hallucinations as the chief symptoms of paranoia, then the majority of psychoses under consideration belong to this class." However, according to more recent classifications, these cases of a more or less transitory nature may justly be placed with the confusional or hallucinatory insanity cases.

A clinical fact of some interest in connection with the insanity following cataract extraction is that even in the severest maniacal cases the operated eye is seldom injured and a perfect surgical result nearly always follows.

Regarding the relative frequency of psychoses after eye operations as compared with

general cases, there are no figures by which accurate comparison can be made. However it would seem from the many cases of confusional insanity reported following cataract operations, as compared with those following all of the other surgical cases, that there can be no doubt regarding the more frequent occurrence of insanity after ophthalmic surgery.

In most ophthalmic reports of this kind no reference is made as to the proportion of operative cases they represented. The only accurate figures which I could find in the literature at my disposal were those of Herman Knapp¹⁵, given in his discussion of a paper by Kipp. He reported the only two cases seen by him in 32 years experience in 15,091 hospital patients. As most of his hospital patients represented surgical cases, his figures could be placed at 2 in 10,000, or more, surgical cases. As Knapp had performed up to that time in the neighborhood of 2000 cataract operations, it would represent 1 in every 1,000 cases of cataract extraction. Knapp evidently did not consider the cases of brief delirium following soon after the operation as true psychoses, for one of the cases cited by me occurred in his practice prior to his report just referred to, and he failed to speak of it.

That these transitory cases are quite common after cataract operation is evidenced by a report of Posey in his text book (Posey and Spillern) in which he tabulates 770 cases of cataract operation with 16 cases of post operative delirium, an average of 2 6-7 per cent.

Kipp¹⁶, in a paper on "Mental Derangements in Eye Hospitals," reports 12 cases of post operative psychosis all following extraction of cataracts, but fails to mention in what relation they stood to the number of cataract operations or to his surgical cases as a whole.

In a more recent paper by Parker¹⁷ he reports 11 cases of delirium following operation for cataract in 376 cases, an average of almost 3 per cent. Like Posey, he also failed to mention the frequency of occurrence relative to his surgical cases as a whole.

In an endeavor to get some idea as to the relative frequency of insanity in ophthalmic surgery, I wrote to some of the leading oculists in the States, but have been able to get but little satisfactory information. Most of them stated that they have seen a number of cases of post operative delirium but as they had not recorded all of their surgical cases were unable to give figures as to the frequency of psychosis in relation to their surgical cases as a whole.

It might be of interest to read the two replies which furnish some data.

Dr. Weeks, of New York, writes: "Of the seven to eight thousand operations I have performed during the last twenty-eight years, I have had post operative mania in probably

twelve cases. All have occurred after cataract extraction, except two, one after iridectomy and one after enucleation. In all but four the patients had been hard drinkers. Pronounced delirium tremens developed in five. Three of the patients with delirium tremens became so violent that they were kept in close confinement. One case of mild delirium occurred in an adult female who was diabetic. She gradually passed into coma and died on the tenth day. All the others recovered.

In all cases, except the cases of maniacal tremens, improvement was noted when the bandage was removed from the unoperated eye, and recovery from dementia in from three to twelve days followed. The dementia varied from a quiet delirium with mutterings and incoherent speech to very active delirium, shouting, etc. In no case was injury done to the operated eye."

If we exclude the alcoholic cases from Week's report, he has 4 cases in 7,500 operations, or one in every 1,875 a much lower percentage than that reported by general surgeons. However, it is probable that Weeks referred only to prolonged cases of insanity and, like Knapp, did not look upon the cases of transitory delirium following cataract operations as true psychoses.

Dr. Casey Wood, writing from Florida where he was spending his Christmas vacation says: "I shall have to speak from memory—but I can remember of only four cases of post operative delirium, not due to atropine poisoning, or to acute alcoholism, in some 2,000 cases of cataract extraction—the only operative procedure in which they occurred so far as my practice was concerned.

In my experience pure post operative, i.e., traumatic, delirium and insanity are exceedingly rare. If one declines to operate on evidently insane patients, is careful to inquire into the extent to which alcohol is used by them, watches the post-operative use of atropine (a not infrequent cause of delirium) and above all, gets his patient out of bed (for from 1 to 6 hours) every day after operation, he will see little or nothing of these serious sequelae."

In a total of about 1,500 cases of cataract extraction in the practice of five of our local oculists, psychic disturbance followed the operation five times, or once in 300. This includes my two cases which occurred in less than 200 extractions.

As there is yet such a diversity of opinion as to which cases should be classed as genuine insanity, the cited figures have little value in determining the relative frequency of psychic disturbance after operations in general and after ophthalmic operations. However, figures show that of all operations

the one for cataract is the most apt to be followed by psychic disturbance. With a better understanding as to which cases should be classed as true insanity we may hope in the future to obtain more definite statistics.

In closing I would offer the following conclusions:

First. That post operative insanity does not occur in individuals mentally sound, that there is a preexisting unstable nervous system and that the symptoms merely become manifest after the operation—the latter acting as the exciting cause.

Second. That the cases nearly all occur in senile subjects and that younger subjects with analogous symptoms nearly always have atheromatous blood vessels or diseased kidneys.

Third. That the most probable cause of the predisposition lies in an atheromatous condition of the blood vessels and possibly in diseased kidneys with resulting intoxication—hence these cases are more properly senile or toxic (renal) insanities than post operative or dark-room delirium.

Fourth. That all cases of mental aberration associated with hallucinations, etc., even though they be of short duration may be looked upon as cases of true insanity—differing only in severity and nature of the symptoms.

Fifth. That psychoses may occur after any kind of operation but that they are especially prone to follow operations upon the genitals and the eyes and more especially after cataract operation.

Sixth. That insanity occurs perhaps once in every 400 to 600 cases of surgery, including ophthalmic surgery and that it occurs once in about every 200 or 300 cases of cataract extraction.

Seventh. That the psychoses following ophthalmic surgery do not differ materially from those after general surgery.

Eighth. That many of the cases are of brief duration, 2 to 4 days, but that some last months or years, or the patients may even become permanently insane. A small percentage die as a result of the nervous affection.

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SCIATIC NEURITIS, FROM PERSONAL EXPERIENCE.*

By M. C. KASH, Salyersville.

It is not at all necessary to go into an anatomical description of the sciatic nerve, as this paper is for the medical fraternity and not for the laity. But suffice it to say that it is the largest nerve in the body. It actuates all the muscles of the back of the thigh, leg and sole of the foot. It is by this action on the leg, foot and toes, combined with the action of the obturator and anterior crural on the muscles of the thigh, that the body is carried forward in the act of running, walking or climbing. It has both motion and sensation. So from actual experience for the past six months, I do know it has sensation.

It is the inflammation of this nerve that is called "sciatica," or sciatic neuritis.

Now it is explained by all medical authorities that sciatica is caused or preceded by an attack of lumbago, pressure on the nerve from some internal or external cause, or from traumatism; in case there is not a rheumatic diathesis. So in this case of mine it was a severe case of lumbago, which preceded the sciatica some several weeks; in fact it was so painful that I could not stand up long enough to wait on customers in the drug store. My weight being 216 pounds, besides having a congenital deformity of my left leg and foot, which caused the muscles of that leg to fail to develop, naturally made it a heavy strain on that leg while on my feet.

Now as to treatment. I began by the elimination method to try to rid the system of toxins. First, I would take either calomel or blue mass followed by a saline laxative; then diuretics, such as bnehu, juniper, acetate of potash, saw palmetto, red cross kidney plasters and I so far departed from medical ethics as to actually take a box of Doan's Kidney Pills. ("Drowning man catching at straws.") Together with all the local physicians of the town and community, constitutional treatment was farther persisted in, such as sodium salicylate with elixir of lactate of pepsin, hot baths, iodide of potash, electricity from gal-

*Read before the Magoffin County Medical Society.

vanic battery, fly blister along the course of the sciatic nerve, about 18 inches long and 2 inches wide, and it dressed with vaseline and morphine sulphate. Hot water bottles, hot sand bags, hypodermic injections behind the head of the tibia, of cocaine and antipirin, with massage daily; rest in bed two and three weeks at a time.

Still with all this treatment, the pain grew worse, especially at night; it was lightning-like at times, boring, burning in character, so that for three months or more my sleep would not be on an average more than two or three hours at night, and then secured under the most powerful narcotics; such as a hypodermic of morphine, cocaine, and digitaline. The bromide compounds or any of the coal tar preparations did not seem to have any effect.

The symptoms of this terrible and persistent neuritis began on me in the latter part of July, 1914, and now in February, 1915, it is not entirely well, but I can begin to do some office work and wait on the drug store.

Now when I look back over the terrible agonies that I suffered (it seems, if possible, the tortures of the damned), during the months of August, September, October, November and December, both physically and mentally, that I hardly see now how I lived through it all.

But in the month of November, after having given up all hopes of a cure, I went to the city of ———, to one of the best institutions in the South for treating nervous troubles of all kinds, and took treatment for a month as follows: Mechanical massage each morning; electric light bath to free perspiration, followed with Turkish or rain bath; then the hose turned on with water at a temperature of 120 degrees Fahrenheit, and played up and down along the tract of the sciatic nerve, over the lumbar region and up and down the spine for some time, changing it suddenly to ice water. (If you have ever tried that, then is when you get home sick and want to leave.) This treatment was used each day at noon. At night the various forms of electricity such as the static spark, high frequency, wave current, etc., especially along the nerve. When the pain would get too severe the doctors would use a hypodermic of morphine, from 1-4 to 1-2 grain. They also used hypodermically a deep injection over the nerve where it comes out of the pelvis and behind the head of the tibia, of quinine and urea hydrochloride.

I consulted six or eight of the best doctors in the city and went the rounds of the materia medica both internal and external. One physician prescribed Warburg's tincture after meals and 1-60 grain of strychnine two or

three times daily, which I used to some advantage.

Soon after I arrived at that institution in the city, an expert chemist made a Wassermann test of my blood, which was negative. So the origin of the trouble was not venereal. He also made a quantitative, chemical and microscopical examination of my urine. The quantity passed in twenty-four hours was about 500 c.c.; dark red color; specific gravity 1030; reaction strongly acid. Chemically, there were 2 per cent urea; phosphates and chlorides in excess. Also present, bile, albumen and urobilign. Microscopical: Crystals of uric acid and ammonia urates, pus cells and hyalin casts; which made it look like I was drifting into a chronic state of parenchymatous nephritis. But after taking the proper diuretic treatment, such as infusion of digitalis to act on the heart and kidneys, as they were generally out of order; besides I had a bad case of intestinal indigestion, for which I took cascara, pepsin and pancreatin; after which the heart, kidneys and indigestion were relieved.

After going all these rounds and taking all this "truck," it is a wonder to me and every one else that I am able to write this paper.

Well with a very slight improvement, I left the institution and started home, still suffering, thinking I would have to wear it out or it wear me out. So after staying in bed for about ten days more after coming home, I was still reading all the authorities I could get hold of, I found in an old work on Practice by Dr. Barthallow (The Eighth Edition), the remedy that has done me more good than anything else, and for which, mainly, I have written this paper.

Now I know that some physicians will condemn this treatment and say that it is only calculated to make a "dope fiend" and it is not a cure at all. But don't condemn it till I have explained. Barthallow, we all know, is good authority on what he recommends, and he says that he has cured some bad chronic cases of sciatica with this remedy. He recommends a deep injection of morphine and atropine just over the sciatic nerve all the way from the great sacro-sciatic notch to the tendon Achilles and the more atropine the better.

So while I was yet in bed and suffering as bad as I ever had been, I began the use of 1-4 grain of morphine and 1-150 grain of atropine each morning, keeping that up for nearly a week. Then I began to decrease the morphine and increase the atropine, making the morphine 1-8 grain and the atropine 1-100 grain. So I began to improve for the first time since I had been sick. Then I used it every other day for a few days, then once a

week for two or three weeks, and now I have not used it at all for over three weeks.

Of course I kept up the elimination treatment of the kidneys and bowels all this time. No, I am not a "dope fiend," neither did I ever make one out of one of my patients, and I have been practicing medicine for nearly twenty-six years. O, yes, some physicians may say that I had been sick with it long enough for it to get well without any treatment, as it only runs about four or five months anyway. In answer to that I will say that I have seen cases of it that had lasted for over five years and then made a bad cripple out of the leg by drawing it about half flexed and was still giving them pain.

The therapy of this treatment is, the atropine runs the blood away from the congested and inflamed nerve sheath and gives it time to recuperate, while the morphine quiets the spasmodic contraction of the muscles that press on the nerve and cause the pain. You understand that all the morphine injections that had been used on me before, had not been combined with atropine, hence no benefit.

Now, in conclusion, I don't advise any physician to leave his hypodermic syringe and the necessary tablets with his patients and just let him use it promiscuously every time he has a pain, or he may cause them to get up the "habit;" but I do say for them to judiciously use the treatment on their patients themselves, not letting the patient know what he is using, and keep up the elimination treatment as I have suggested, and he will find that he will in a short time cure his cases of sciatic neuritis and not allow them to pass through almost the agonies of death, like I have done.

Unheated Vaccines.—Unheated vaccines are recommended for use by A. J. Casselman, Camden, N. J., (Journal A. M. A., Jan. 23, 1915). Their use had been previously suggested if it were possible to destroy their vegetative powers without destroying their immunizing effects, which is difficult. Heated vaccines largely lose the latter and Casselman's choice of germicides was finally narrowed down to the ultraviolet rays and the phenol group. The former have not yet been tried but he has found immersion for twenty-four hours in 0.25 per cent tricresol solution at 37 C. most effective. He describes his methods and mentions his experimental work. As yet he has not attempted to definitely prove the great advantage of unheated vaccines but that has been sufficiently established already. It must be proved, however, that the vegetative power is removed and at least a thousand different vaccines should be prepared by the methods he used before they are relied on without testing.

CLINICAL CASES

SYPHILIS OF THE LUNG; REPORT OF A CASE.*

By CLAUDE G. HOFFMAN, Louisville.

While it is admitted without question that syphilis may implicate any structure or tissue embraced within the human organism, it is evident that involvement of the lung is exceedingly rare.

According to Osler (1909) in twenty-five hundred autopsies at the Johns-Hopkins Hospital, lesions of the lungs believed to be syphilitic, were present in only twelve cases; and before that time Lindsay (1904) stated that pulmonary syphilis was uncommonly observed, and that only a few undoubted cases had been recorded in the literature of the world.

On December 11th, 1912, Mr. H. B. H., aged twenty-one, occupation bricklayer, came under the observation of Dr. Dunning S. Wilson. There was nothing of interest in the family history. Both parents reported living and healthy at the age of about sixty-five years. The patient had no definite information concerning the diseases from which he suffered during childhood.

Inception of present trouble five weeks previously, when he began complaining of cough, weakness, and loss in weight. Whereas he had formerly weighed one-hundred and forty-nine pounds, at the time of first examination his weight was one-hundred and thirty-two, a loss of seventeen pounds within a period of six weeks.

Careful urinalysis resulted in negative findings. The cough was quite marked at all times, but was particularly severe in the morning, and there was considerable expectoration of a thick, viscid, apparently mucopurulent material, yellowish in color. The patient suffered from slight dyspnea upon exertion, and when in the recumbent posture. There was some morning elevation of the temperature. The patient said he had one night sweat about a week previously. Loss of strength marked, cervical glands slightly enlarged. History of small penile sore three years ago, the scar of which was still plainly apparent.

December 12th, 1912: Sputum examination negative for tubercle bacilli; consistency thick, color grayish-yellow; mucus present, pus large amount; epithelium, influenza bacilli, pneumococci, streptococci and staphylococci present. Sputum again examined January 8th, 1913. Still negative for tubercle bacilli, and other features also remained unchanged.

*Read before the Jefferson County Medical Society.

Physical examination of the chest: Percussion revealed marked loss of pulmonary resonance over apices of both lungs anteriorly and posteriorly. Auscultation showed greater involvement of the right than the left side; moist rales detected both anteriorly and posteriorly extending over the entire upper half of the right lung. Examination of the throat disclosed a small ulcer upon the left tonsil.

Wassermann reaction, December 13th, 1912, reported negative. With the idea that the pulmonary involvement might owe its origin to syphilis, and that the spirochaetae might be encapsulated within some gummatous condition of the lung, and might become liberated under iodide of potassium, large doses were administered three times daily for three weeks. On January 9th, 1913, the Wassermann reaction was found to be two-plus positive.

Based upon the foregoing clinical history and laboratory findings, Dr. Wilson made the diagnosis of pulmonary syphilis, and the patient was referred to me for treatment on January 11th, 1913. A few days thereafter (January 15th) the first dose of .9 gram neosalvarsan was administered intra-muscularly. The clinical symptoms showed marked improvement within a week, the cough had about subsided in ten days, the temperature had receded to normal, and the tonsillar ulcer had entirely disappeared. A two weeks course of mercurial inunctions was then given, and by February 2nd, the patient had gained five pounds in weight.

March 15th, Wassermann reaction still two-plus positive. Neosalvarsan .6 gram given intra-venously, followed by severe reaction. Another two weeks' course of mercurial inunctions commenced on April 5th, by which time the patient had gained ten pounds and was absolutely free of all clinical symptoms.

May 26th, Wassermann reaction negative. Neosalvarsan .6 gram intra-venously followed by slight reaction. No further treatment given excepting an iron tonic, the patient being instructed to report weekly for another month. In the meantime he was able to resume his work without the slightest trouble, having regained his normal weight and strength. Careful and repeated examination showed the lungs absolutely clear of all pathology.

July 4th, Wassermann reaction strongly negative.

This is the only case of pulmonary syphilis that has come under my immediate observation, and the meagre literature upon the subject emphasizes the truth of the statements made by Osler, Lindsay and others that involvement of the lung must be exceedingly rare.

While current text books admit the possibility of pulmonary implication during the

course of acquired syphilis, the majority of them dispose of the subject in a few lines.

It has hitherto been the prevailing belief that pulmonary involvement occurred only during the late tertiary period of syphilis, the pathology being essentially a gummatous infiltration of the mid-portions of one or both lungs. In the case reported the initial lesion occurred but three years ago, and only the apices of the lungs appeared to be extensively implicated.

According to most observers the main point of differentiation between tuberculous and syphilitic involvement of the lung is that the former is invariably accompanied by elevation of temperature, whereas the latter is not. In this case there was moderate elevation of the morning temperature.

Although it was at one time believed that differentiation between pulmonary tuberculosis and syphilis was difficult or impossible, this is no longer true since careful and repeated serological tests afford a reasonably accurate means of definite diagnosis. In this case, however, the Wassermann reaction was at first negative, but later examinations gave positive findings.

In the presence of undoubted pulmonary lesions, provided repeated examination of the sputum reveals no tubercle bacilli, a previous history of lues should always arouse suspicion of pulmonary syphilitic involvement, even although the Wassermann reaction may be negative or but feebly positive.

Dr. Wilson is certainly to be congratulated upon having made an early diagnosis in the case reported.

DISCUSSION:

Dunning S. Wilson: I have very little to add to this report, except to offer the thought that perhaps syphilis of the lung is not so rare as we have heretofore been led to believe; at least, the condition of Dr. Hoffman's case did not strike me as being unusual, because I had seen several similar cases. However, not being as familiar with the literature on this subject as some of my colleagues, I did not realize that I was making diagnoses that might be questioned.

The presence of tubercle bacilli in the sputum by no means eliminates the possibility of a syphilitic condition of the lung as a synchronous affection. I have seen a number of cases of pulmonary tuberculosis, diagnosed by means of microscopic examination of sputum, in which a syphilitic condition was also present, as evidenced by a positive Wassermann reaction, and in such cases it has been astonishing to me how quickly all the symptoms and clinical evidence of tuberculosis cleared up under treatment directed to the syphilitic condition. I do not mean to be understood as saying that anti-syphilitic treatment

cured the pulmonary tuberculosis; the idea I wish to convey is that in these cases, syphilis of the lung was evidently the primary factor.

In Dr. Hoffman's case, I was rather inclined to doubt that the patient had tuberculosis, although all of the physical signs appeared to point to that diagnosis. The young man at first denied a specific history, but the discovery of the scar of the initial lesion settled that question. The question arose as to whether the ulcer on the tonsil was of syphilitic origin. I believe that it was. This patient has made a complete recovery so far as we know, and I think Dr. Hoffman is to be congratulated upon the result.

W. A. Jenkins: I do not believe there is any doubt in the minds of most of us that Dr. Hoffman's diagnosis of a syphilitic lesion of the lung in this case, is the correct one, but I do not agree with Dr. Wilson that this condition is present as frequently as he seems to believe. According to the best literature on the subject, syphilis of the lung is an exceedingly rare condition. That incomparable physician, Babcock, of Chicago, collected clinical and post-mortem data in connection with six thousand cases, and in only two of these were there unmistakable evidences of syphilitic lesions present in the lungs. In another collection of 104 cases of hereditary syphilis, all of which came to post-mortem, in only four were lesions found in the lungs.

Before coming to any conclusion in a case of this kind, we should always pursue the course of procedure followed in making the diagnosis in Dr. Hoffman's case; that is, by a process of elimination, making repeated search for clinical evidences of tuberculosis, repeated examinations of the sputum, some of the well known reactions for tuberculosis, such as the Von Pirquet test, guinea pig inoculation, etc., and also the serum tests for syphilis. Only after every other possibility has been eliminated are we justified in arriving at a diagnosis of syphilis of the lung.

With reference to the period of time between the primary sore and the lesion of the lung, we have learned that there is not always a long period between the initial lesion and the tertiary stage of syphilis. In many cases we find tertiary lesions present when, according to the old idea, the patient is still in the primary stage of the disease. Pathologists, as a rule, include syphilitic lesions of the lungs in the category of so-called tertiary lesions. Although it is possible that syphilis of the lung and pulmonary tuberculosis may exist coincidentally, I think we should exhaust every diagnostic means at our command before coming to the conclusion that the syphilitic condition is the primary one.

Geo. H. Day: It has been my experience in treating syphilis, that where a syphilitic individual contracts tuberculosis, the latter condition is usually greatly benefited by the anti-syphilitic treatment; but that when an individual

suffering from tuberculosis contracts syphilis, he usually succumbs very promptly.

Leon L. Solomon: Like Dr. Will Jenkins, I cannot agree with Dr. Dunning Wilson, that "syphilis of the lungs" is of much more frequent occurrence, than clinicians have hitherto recognized. If this were true, syphilitic lesions of the lungs would be found, post-mortem, much more frequently, than is the case. On the contrary, Dr. Jenkins has just referred to the records of some six thousand "autopsies on syphilitics," reported by Babcock, of which only two showed syphilitic lesions in the lungs. Furthermore, the statistics of Die Allgemeine Krankenhaus in Vienna (founded with the understanding that every patient, dying in that institution, must be autopsied) bear out this contention on the part of Dr. Jenkins and myself. For many years this hospital has housed in the neighborhood of two thousand patients, daily. As can well be imagined, there are many deaths, and each case is autopsied, yet the records of Kolisko, extending over a period of years, show less than one hundred cases, in which syphilitic lesions were found in the lungs.

In Dr. Hoffman's case, the diagnosis of syphilis appears to have been reasonably certain, and the case was admirably handled by Dr. Hoffman. But, after all, it may or may not have been a case of syphilis of the lungs. As Dr. Wilson has pointed out, syphilitic individuals, who have tuberculosis, usually show marked improvement in the tuberculous condition, under anti-syphilitic treatment. Furthermore, the fact, that manifestations of syphilitic involvement of the lungs are so rarely found in post-mortem work is in itself evidence, of the fact that still-born children, the offspring of syphilitic parents themselves in the acute stage of the disease, not infrequently show, on the autopsy table, that the inability to take in oxygen was due to solidification of a large portion of the lungs, or so-called "pneumonia alba," to which Babcock in his superb work on pulmonary diseases, makes several references.

Notwithstanding the observations of Dr. Wilson, which carry weight, because of his frequent examinations of "lung" patients, I believe it is a fact, beyond reasonable dispute, that syphilis of the lung is a very rare condition and I desire to go on record, before the fellows of this society, as insisting on the extreme infrequency with which syphilis in the adult, either acquired or hereditary, attacks the lung.

H. J. Farbach: I believe that syphilis is very often a predisposing cause of tuberculosis. However, it is very seldom an exciting cause of pulmonary tuberculosis. I would like to hear some discussion as to the usual location of syphilitic lesions in the lungs. My impression is that when there is true syphilitic involvement, it is of the base of the lung and not of the mediastinum as in this case.

Ap Morgan Vance: It so happens that I have

had two cases of syphilis of the lung. One of these was in a man who was very prominent here some years ago, who was innocently infected with syphilis, the chancres being on either index finger. He took the best treatment we knew of in those days—mercury and iodid of potassium. At the end of five years he manifested dropping of the eye-lid, which is indicative of cerebral syphilis. He went back to his medicine but the lid stayed dropped. Then he suddenly had hemorrhage from the lungs and his sputum was full of tubercle bacilli. He took his family and went West and stayed out there and treated his supposed tuberculosis for about three years. The eye-lid was still dropped. Then he concluded that he did not have pulmonary tuberculosis and went to Hot Springs, Ark., and put himself under Dr. Greenway's care, and for many weeks or months he took an ounce of iodid of potassium at a dose, three times a day. He made a complete recovery, the dropping of the lid disappeared and he is a big, fat healthy man to-day.

The other case I saw also in this city. He was being treated for a tuberculous lesion of the lung, well down on the right side, towards the base. I looked him over and concluded that he had syphilis. He absolutely denied a specific history. Nevertheless, I advised anti-syphilitic treatment and keep it up, but the boy would not take it. I saw him again in six months. By that time he had a couple of gummata on the frontal bone, which was absolutely positive evidence of the nature of his trouble. I gave him anti-syphilitic treatment myself and he made a complete recovery.

There is no doubt in my mind that both of these were cases of syphilis of the lung, and both were in the right lung.

Herbert Bronner: Dr. Hoffman's is one of the most interesting and unique cases that I have ever heard reported to this society.

The question asked by Dr. Farbach brings up an frank to say that all I know about it has been the subject of the pathology of this condition. I gathered from reading, and not from clinical experience. The English seem to have done the most work along this line, and their investigations have shown that the lesion is usually located in the base rather than in the apex of the lung, as in Dr. Hoffman's case. In their post-mortem work they classify syphilitic lesions of the lung under three heads: (1) gummatous conditions; (2) sclerotic conditions, and (3) what they call syphilitic phthisis. In the first two conditions, there are practically no clinical manifestations. In the third type, to which Dr. Hoffman's case undoubtedly belongs, the symptoms are practically the same as those of pulmonary tuberculosis, active haemoptysis, elevation of temperature, night sweats, etc., the diagnosis being arrived at in the same manner as that brought out by Dr. Hoffman in his very excellent report.

F. C. Askenstedt: I do not doubt that Dr.

Hoffman is conscientious in his diagnosis, yet I question whether this was a case of syphilis of the lung. As has been intimated by several of the preceding speakers, syphilis nearly always involves the base, or perhaps the middle lobe of the lung, while tuberculosis is most frequent in the upper lobe. In syphilitic involvement of the lung, there is little or no elevation of temperature, while fever is used in tuberculosis. Again, in syphilis of the lung there is but little or no emaciation, which was quite marked in Dr. Hoffman's case. In syphilitic involvement of the lung (with the exception of the rare type referred to by Dr. Bronner) there is a dry, hacking cough; gummata do not break down the lung very readily, while in tuberculosis we find comparatively rapid disintegration of the lung tissue.

In Dr. Hoffman's case it seems to me that, while syphilis may have been a predisposing cause, the patient probably had a tuberculous infection. The fact that tubercle bacilli could not be demonstrated in the sputum does not prove otherwise, because tubercle bacilli cannot be found in one case of about twelve cases of tuberculosis examined. Furthermore, the fact that the condition responded promptly to anti-syphilitic treatment does not eliminate the probability of tuberculosis, because we know that arsenic is often of great benefit in tuberculous cases.

T. M. Dorsey: Just a word in reference to the rarity of syphilis of the lung. During my service at the University of Louisville as assistant pathologist, nearly all coroner cases were posted at the college. Hundreds of cases were examined macroscopically and microscopically for rare pathological conditions, but never were we able to find a gummata of the lung. Many irregular caseous masses, encapsulated by dense fibrous tissue which radiated into the lung and stenosis of a bronchus, with secondary bronchiectatic changes were frequently found, but when microscopic examinations were made bacillus tuberculosis were present. In about 90 per cent of the post-mortems tubercular lesions were demonstrated, usually being of the obsolete type. Careful examination of the underlying lung tissue revealed the presence of scars, fibrous knots, or encapsulated gritty masses, the residue of post-tuberculosis. Sometimes the scars are concealed by localized compensatory emphysema. Discovery of calcareous or caseous masses in the visceral pleura of the fissure of the lung also indicate the nature of old adhesions.

Claude G. Hoffman. (Closing): I reported this case because of the rarity of the condition; I have never heard a case of syphilis of the lung reported. Most of the text-books dispose of the subject with a paragraph or two, with the exception of Osler. Dr. Wilson's modesty prevented him from saying that this man had been treated for tuberculosis by several physicians before he came under Dr. Wilson's observation. From the rapidity with which the symptoms and

pathology cleared up under anti-syphilitic treatment, I do not believe there was any tuberculous involvement of the lung at all. It has now been nearly two years since he took the least treatment and he has had no trouble since that time. If there had been any tuberculous involvement it would have manifested itself by this time.

Referring to Dr. Farbach's question (which Dr. Bronner answered), I stated in the report that "it has hitherto been the prevailing belief that pulmonary involvement occurred only during the late tertiary period of syphilis, the pathology being essentially a gummatous infiltration of the mid-portions of one or both lungs; in the case reported the initial lesion occurred but three years ago, and only the apices of the lungs appeared to be extensively implicated."

NEWS ITEMS AND COMMENTS

Dr. George F. Butler, who is meeting with gratifying success in making a high class medical institution of Mudlavia, has opened a Chicago Office at 1451 People's Gas Building, 122 South Michigan Boulevard. He will be at that office on the first and third Saturdays of each month, from 2 to 4 p. m., for free consultation with those who wish to present their cases or who desire special information concerning the Mudlavia Treatment. Appointment may be made in advance by addressing Dr. George F. Butler, Medical Director Mudlavia, Kramer, Ind.

The December issue of the Journal of the Michigan State Medical Society calls attention editorially to the danger of using poisonous fly destroyers.

From July 1 to October 15, 1914, forty-five cases of poisoning of young children were reported in the press of a few states and it is pointed out that the symptoms of arsenical poisoning and cholera infantum being very similar there are possibly many more cases of the kind. It might be well in view of this danger for the physicians to eliminate the possibility of arsenical poisoning before diagnosing a case as cholera infantum. A few years ago there was considerable agitation against the use of phosphorous matches, partly because of some children being poisoned by eating or sucking the heads of the matches. There are doubtless many more cases of poisoning from the poisonous fly destroyers. Phosphorous matches have been abolished, so should be poisonous fly destroyers.

It seems this danger has already been recog-

nized by the authorities in far away South Africa and the sale has been forbidden, except by licensed chemists, of certain arsenical fly destroyers, more particularly the tin boxes which have a wick or wicks through which the poisoned water is drawn. The fact that sugar is added to draw the flies makes these boxes especially dangerous to young children; furthermore all these poisonous fly destroyers are usually placed on the window sill and children as well as flies are attracted to the windows and the poisons are thus within their reach.

Both the blotting paper impregnated with arsenic, (which is put in an open saucer with water and sugar) or the tin boxes with wicks to draw the poisoned water to the surface are extensively used, and there is probably no poison so commonly and unnecessarily used where it is perforce within the reach of young children as these various arsenical fly destroyers. In country homes where it often takes some hours to get a physician, and even in our cities among the foreign born, where the parents are, as is well known, slow to call the services of a physician for childish ailments, the danger is especially great. There are as effective and more sanitary ways of killing flies. *Poisonous fly destroyers are an unnecessary evil and should be relegated to the past like the phosphorous match.*

The Interstate Association of Anesthetists will hold a meeting in conjunction with the Ohio State Medical Association in Cincinnati, May 4th and 5th, 1915. They have a very interesting program and we note especially that Dr. Emmett F. Horine of Louisville, will read an essay on "Selection of the Anesthetic," and Dr. W. Hamilton Long will read a paper on "Anesthesia—A Full Fledged Specialty."

Funeral services for Dr. Dudley S. Reynolds, who died suddenly January 4th, following a heart attack at "West Meath," his country home, near Pleasure Ridge Park, were conducted at the First Christian church, the Rev. Dr. E. L. Powell officiating. The pallbearers were: Active—Dr. Curran Pope, Dr. William B. Doherty, Strother Helm, Kentrick Lewis, Z. A. Coleman, T. J. Flournoy and Dr. W. F. Boggess. Honorary—Dr. L. S. McMurry, Dr. J. M. Mathews, Dr. T. D. Finck, Dr. G. B. Gilbert, Dr. W. O. Green, Dr. Gaylord C. Hall, Dr. Frank C. Wilson, Dr. John B. Richardson, Dr. T. P. Satterwhite, Dr. R. T. Yoe, Dr. Wade G. Schacklette and Carl Wiseman.

The inmates of the Kentucky Confederate Home hereby place upon record their appreci-

ation of the many acts of kindness shown them by Dr. Dudley S. Reynolds. Although a Federal soldier, for twelve years he has been a member of the Medical Advisory Board of this institution and aided in the treatment of hundreds of those in the home that needed special service for troubles with the eye, ear and throat. All these generous and skillful ministrations were rendered without compensation of any kind beyond the payment of his railway fare to and from Pewee Valley, and we feel very sure that there are few instances amongst the members of the medical profession that show a wider and more beautiful spirit of charity and humanity.

We sincerely and deeply mourn the death of our benefactor, and we hereby convey to his family our tenderest and sincerest sympathy in the sorrow that has come with his death. We mourn him as a dear friend and we will ever remember him as one of the most accomplished of physicians and one of the most unselfish and noble benefactors in the great profession of which he was such an eminent and distinguished member.

The commandant was requested to sign this memorial for every inmate of the home, and have it presented to Dr. Reynolds' family in behalf of every soldier on the rolls of the institution.

HENRY GEORGE,
Com. Kentucky Confederate Home.

Members of the State Medical Association, especially those who attended the last annual meeting at Newport, will learn with regret that the famous Blue Grass Inn, where the meeting was held and known from coast to coast among traveling men and sportsmen, was very recently destroyed by fire. The loss was estimated at \$80,000. There was no insurance on the building, the policies having been permitted to lapse a short time ago.

The Inn was built ten years ago by a syndicate, of which our colleague, Dr. Berry, is a principal stockholder. It was built according to the Queen Anne type of old English architecture and was considered the most beautiful building in Campbell county.

Bell county has been selected by the State Board of Health and the Rockefeller Foundation for experiment in intensive community work. A mining camp will be converted through their efforts into conditions approximating ideal from a sanitary and hygienic standpoint. A sanitary inspector and two trained nurses will be paid by the Foundation during the experiment.

The nurses will be chosen by the Kentucky Tuberculosis commission which to-day appointed a committee composed of Dr. H. S.

Kellar, of Frankfort; Dr. R. T. Yoe and C. L. Adler, of Louisville, to engage the nurse.

James P. Faulkner, now on the staff of the commission, will have charge of the work in Bell county until it is started. He will then resign to become secretary of the Georgia commission. The work will be undertaken this month.

Holding that the evidence did not establish the allegation of negligence on the part of Dr. Leon L. Solomon in his professional services to Mrs. Katherine James in April and May 1913, Judge Thomas R. Gordon gave peremptory instructions to a jury to return a verdict in favor of the defendant.

In a majority of cases where the court gives peremptory instructions to find for a defendant they are given on the conclusion of plaintiff's evidence, but in this case Judge Gordon heard all the evidence offered by both sides before considering the question of instructions.

Mrs. James was injured in a street car accident April 5, 1913, and July 6, 1913, she suffered a broken leg by reason of her hip giving way with her and causing her to fall. It was alleged that Dr. Solomon had been negligent in his treatment of the first injury and that had the plaintiff been accorded skilled treatment on the first occasion she would not have suffered the second accident. The court said there was nothing by which either the court or the jury could determine that the second accident was caused directly or indirectly by the first accident, and that it was the duty of the court to assume all responsibility on questions of law and facts, and not shirk that responsibility by throwing it on the jury.

Dr. Cynthia L. Cunningham, of Princeton, who recently offered her service to the Red Cross Society for hospital duty on the battlefields of Europe, has received her passport from Secretary of State W. J. Bryan and will leave here within a few weeks for New York City. She will sail for Europe as a volunteer in the hospital corps of the Red Cross, probably being stationed in France. Dr. Cynthia Cunningham is a daughter of Dr. Z. T. Cunningham, a practitioner of Caldwell county. She graduated in medicine in Louisville in 1906 and for the past three years has held a position as resident physician at a sanitarium at Memphis, Tenn.

Dr. I. S. Warren, honorary member of the Pulaski County Medical Society passed away at the Somerset General Hospital, January 15, 1915, from cerebral hemorrhage following operation for sarcoma of the neck. He was the oldest member of the profession here, having been an associate of Drs. Geo. Perkins, J. W. F. Parker and G. M. Reddish. While

he had not been in very active practice for the last few years, he was an active member of the County Society and Study Club, rarely ever missing a meeting; he attended the meeting of the study club the night before he was operated on. He will be greatly missed by the profession of this county.

Mrs. Charlotte Hathaway French, wife of Roy L. French, secretary of the Tuberculosis commission, died February 5, in Chatham, Ont. Mr. and Mrs. French had been married only three months. Mrs. French was an invalid and Mr. French had hoped that the change of climate would improve her health when she accompanied him to Frankfort immediately after their marriage, but she did not improve and returned a few weeks ago to the home of her parents.

THE FORUM

To the Editor:

In your issue of January 15, 1915, Dr. Curran Pope describes "A New Method of Examining for Movable or Floating Kidney." From what Dr. Pope has said one would conclude that the standing position for examination is rarely used and he states that in an examination of the literature and text books he finds only one reference that approximates the method suggested by him and in this the patient stands erect and the examination is made from behind.

As the article emphasizes, the posture of the patient influences markedly satisfactory palpation of the kidney. The position or location of the examiner, however, as relates to that of the patient, is of secondary importance and a matter of personal choice, but one of ease and that permits freedom of movement is essential.

For a number of years it has been the routine of the writer to make these examinations with the patient in the following three positions: first, in the dorsal position with the knees and hips flexed and shoulders slightly raised, second, in the lateral or Sims' position; third, in the standing position with the nates resting against the edge of a table, the torso inclined forward and to the suspected side, often with the foot of that side resting on a block six or eight inches high. The body is further supported and relaxation encouraged by the hands resting on the edge of the table. This latter position was described by Charles Noble several years ago and is recorded in *Gynecology and Abdominal Surgery* by Kelly and Noble, page 764, edition of 1908. When conducting an examination in this position, the physician is seated facing the side of the patient and palpation is made with both hands, one at the back and the other applied to the rectus abdominis. It is a well known fact that bimanual method is the only satisfactory one of conducting

examinations of abdominal organs. One hand examinations are notoriously misleading.

I find in the first six books taken from my shelves, that treat at all abdominal visceroptoses, the standing position with the trunk bent forward is spoken of as being the most satisfactory for detecting and determining the range of mobility of so-called floating kidneys.

After comparing by application the method described by Dr. Pope with that of Noble, I feel sure the majority will conclude that the former is less satisfactory, and that, while being preferable to the dorsal decubitus, it is an awkward position for both patient and examiner.

Since relaxation with the aid of gravity is the aim of this position, and if the patient leaning forward over something or someone will contribute to accomplishing this, it would seem, especially if the patient be a woman, that it would be better if the one she leans against or over be a nurse, as suggested by A. B. Johnson, *Surgical Diagnosis*, Vol. 2, page 27. This leaves the examiner free to assume whatever position he finds most convenient.

From the writer's observation, most diagnosticians make use routinely of the standing-forward-bending position when examining for nephrop-tosis. I have never seen described the prone position with the chest slightly elevated, but know that this position is in use. It, however, is but a modification or exaggeration of the forward-bending position. The sitting or semi-sitting posture referred to in the article under discussion is spoken of by several authors as being highly satisfactory. It will be found where there is marked and persistent rigidity of the muscles rendering palpation extremely difficult, that placing the patient in a hot water bath, lying on the side opposite the suspected one, with limbs flexed and body inclined forward, will greatly assist in inducing relaxation permitting very satisfactory examination.

Whatever the position, extreme gentleness is the sine qua non of this and all other abdominal examination. The anterior abdominal wall is particularly rich in nociceptor nerves and the least roughness readily awakens noci-associative memory and vigorous protest and protective effort is offered in the form of muscle rigidity.

WOODSON H. TAULBEE.

Sixty per cent. of all the sinus troubles we treat are due to the pneumococcus. A majority of the mastoid cases which come to operation are due to pneumococcal infection. I have had as good success with vaccine as with anything else in a chronic infection.—The Journal of the Indiana State Medical Association, Dec., 1914.

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NEXT MEETING STATE ASSOCIATION, LOUISVILLE

COUNTY SOCIETY REPORTS

Bath—The Bath County Medical Society met in the office of Dr. Daily, January 12, 1915, and elected the following officers for 1915:

President, A. W. Jones; Vice President, H. S. Gilmore; Secretary-Treasurer, H. J. Daily; Delegate, A. W. Walden.

The following paid dues for 1915: A. W. Walden, A. W. Jones, L. F. Robbins, H. L. Nickel, J. M. Feland, H. S. Gilmore, H. J. Daily.

H. J. DAILY, Secretary

Bourbon—Milton J. Stern entertained the Bourbon County Medical Society on Thursday evening, February 15, 1915, with a dinner at Stout's Cafe, at 7:30 P. M. after which we convened in his offices, corner Fifth and Main.

Minutes of the January meeting read and approved.

The society then elected a Chief of Staff for Massie Hospital.

The report of cases was as follows:

Frank Fithian: "Aente Bright's and Double Bright's Pneumonia Following Tonsilitis."

L. R. Henry: "Pneumothorax and Malignant Endocarditis Following Pneumonia."

E. H. Smith, Shawhand, J. M. Williams, and C. G. Daugherty: "Strangulated Hernia in the Aged, Relieved by Operation."

J. M. Williams read a paper on "Stones and Infections in the Gall Bladder and Bile Tracts Treated by Operation."

J. S. Wallingford read a paper on "Some of the Factors in Acute Changes of the Respiratory Passages."

We hope a full attendance continuing the interest shown in the January meeting. Get your work done and come.

J. T. BROWN, President.

Barren—The Barren County Medical Society met in Glasgow, January 20, 1915, with the following members present: Acton, Botts, Smock, Porter, Howard Taylor and Miller.

The society was called to order by Vice President Porter. The minutes of last meeting were read and approved.

C. C. Howard, in response to a call for clinical cases, reported a case of hemorrhoid, with alarming hemorrhage, which he could relieve only by ligation. Recovery was complete.

A. T. Botts reported the case of a nine-months-old child, which was interesting because of several unusual and unexplainable symptoms, among which was a temperature of 110 degrees which was confirmed by repeated tests.

The writer reported the result of a pistol duel between two negro men, who fired at each other simultaneously, each receiving fatal wounds in the abdomen, death resulting the following day. The

foregoing cases were discussed by several members.

J. H. Miller had not prepared his paper on "Appendicitis" but gave instead an interesting talk on the management of cases where operative procedure is impracticable or is denied the surgeon, by the patient or his friends. Dr. Miller advised complete rest, fasting, high enemas, mixed vaccines, and warm, moist applications to the bowels. The question of opiates should be decided by existing conditions. He opposed ice-cold applications on theoretical grounds. However, he stated emphatically that nearly every case of appendicitis should be treated surgically. The subject was ably discussed by Porter, Botts, Acton and others.

After arranging program for next meeting the society adjourned to meet Wednesday, February 17th, 1915.

J. M. TAYLOR, Secretary.

Barren—The Barren County Medical Society met in regular session in Glasgow, February 17, 1915.

Members present: Froedge, Jordan, Miller, Porter, Acton, Botts, Taylor and Howard.

The meeting was called to order by Dr. Porter. The minutes of the previous meeting were read and approved.

There being no papers, the time was occupied reporting and discussing clinical cases.

Interesting cases were reported by Drs. Jordan, Porter, Miller and Botts, and the general discussion which followed was interesting and highly enjoyed by all.

An interesting program was arranged for next meeting, after which the meeting adjourned to meet in Glasgow, March 17, 1915.

J. M. TAYLOR, Secretary.

Boone—On the evening of February 24th, the Boone County Medical Society was entertained by Judge J. G. Tomlin and wife at their beautiful home in Walton. After a bountiful turkey dinner was served, with everything on the side that goes to satisfy the inner man, the meeting was called to order by the President, B. K. Menefee. The election of officers for the ensuing year resulted as follows: H. H. Hays was elected President; O. E. Senour, Vice President; S. B. Nunnelly, Secretary and Treasurer; B. K. Menefee, Delegate to the State Society.

W. M. Mithoefer, of Cincinnati, gave us a very interesting lecture on "Infections of the Middle Ear" which was very instructive and enjoyed by all present. Those present were Drs. Mithoefer, McKim, Coke, Langdale, of Cincinnati; Slater and McChord, of Ludlow; Furnish, of Covington; Metcalf and Menefee, of Walton; Hafer, of Hebron; Hays, of Bullittsville; Senour and McKee, of Union. After a social session the meeting adjourned to meet with Dr. Hayes on February 17th.

O. E. SENOUR, Secretary.

Christian—The Christian County Medical Society met in the Avalon, Hopkinsville, Tuesday, February 16th, with the President, Dr. Gates, presiding. The following members present: Drs. Gates, Rozzell, Paine, Rice, Lack, Gower, Riley, Barker, Candle, Jackson, Erkiletian, Stone, J. E.; Sanders, Bell, Keith, Sights, Gaither, Watts, Harned, Reynolds, and Sandbach.

The minutes of the last meeting were read and approved.

A. C. Held and H. C. Sanders were received as members.

B. A. Caudle reported a case of Rheumatoid Arthritis. Discussed by Drs. Rozzell and Gower.

Austin Bell reported a case of "Angina Pectoris." Discussed by Drs. Rice, Caudle and Paine.

J. L. Barker reported two similar cases of a discharge of blood from the bladder in pregnancy. In one beginning at the fourth month and continuing until delivery and then no further trouble. The other one beginning in the third month and subsiding within a month on calcium lactate.

J. Paul Keith and **Gaither** reported a case of "Endocarditis Complicating a Cholecystitis."

E. T. Riley presented a clinical case. A committee of Drs. Gaither, Barker and Sights was appointed by the chair to make examination and diagnosis. Report: "Pyelitis, caused probably from a renal calculi which has never passed. There is a question as to infection of gall-bladder."

H. W. Watts read one of the best paper of the year on "Grippe."

W. E. Reynolds read a very interesting paper on the "Care of the Woman and the Baby."

These papers were discussed at length by Drs. Caudle, Sights, Bell, Barker, Gower, Gaither and Watts and Reynolds in closing.

After sixteen members had paid their dues we stood adjourned to meet again the third Tuesday in March.

W. S. SANDBACH, Secretary.

Carlisle—The Carlisle County Medical Society met in R. T. Hocker's office, at Arlington, on March 2nd, 1915, with the following members present: Hocker, Dunn, Jackson, W. S. Mosby, Crouch, Payne, Marshall, Gilliam, Simpson and Pease, and the following visitors: Poples, of Springhill; Rev. Taylor, Rev. Hines and Rev. Rouse.

In the absence of the President and Vice President, R. T. Hocker was elected President pro tem. The Secretary also being absent, Dr. Payne was elected Secretary pro tem.

Bro. Hines read a passage of Scripture and Bro. Rouse led in prayer.

Minutes of previous meeting read and approved.

The Committee on Arrangements reported they had secured Dr. Hocker's office as a place of

meeting and that dinner would be prepared at the Hotel Victor.

The scientific program was then taken up.

Miss Keith being absent her paper, "The Care of the Typhoid Fever Patient," was read by Dr. Dunn. The paper was most excellent, showing fully Miss Keith's ability to properly nurse such a patient.

Motion carried that the society thank Miss Keith for contributing the paper.

J. F. Dunn read a paper on "Acute Bronchitis in Children." He completely covered the diagnosis and treatment.

H. T. Crouch opened the discussion, emphasizing castor oil early in the case when the secretions were scant and cough tight. Mosby, Payne, Hocker and Jackson took part in the discussion, Dunn closing.

W. L. Mosby read a very interesting paper on "Puerperal Fever."

W. Z. Jackson opened the discussion. Crouch, Payne, Gilliam, Simpson and Hocker, also discussed the paper.

Motion carried to adjourn for dinner.

Reassembled at 1:30 P. M.

R. C. Hocker read a paper on "Chorea," which was very interesting and brought out a thorough discussion by Mosby, Marshall, Crouch and Payne. Hocker closed the discussion.

The society adjourned to meet in Milburn, the first Tuesday in June.

This was a good meeting and we have every physician doing active practice in the county enrolled as members except one.

T. J. MARSHALL, Secretary.

Christian—One of the most delightful affairs of the season, comprising both business and pleasure, was the joint meeting January 19th, of the Christian County Medical Society and the pharmacists of the county, with the representatives of the press and dentists as invited guests.

The President called the meeting to order at 11:30 P. M. and the minutes of the last meeting were read and adopted and Drs. W. R. Frey of Trenton; and Stanley Strobie, of Hopkinsville; were received as members.

J. G. Gaither reported and presented a clinical case of "Bone Transplantation."

At 12:30 Mr. T. L. Metcalf, proprietor of the Avalon, and a prince of good fellows, invited us into the beautiful banquet hall where a spread fit for kings was served, with Mr. Metcalf as host and giving his welcome smile and personal attention to everyone. The beautifully decorated and in addition to the large vases of flowers, at each plate there was a boutonniere. The menu

table extended the full length of the auditorium, consisted of

	Oyster Soup	
Celery		Salted Almonds
	Turkey	
Cranberry Sauce		Oyster Dressing
	Salad	
Pickles		Nut Bread
	Ice Cream	
Cake		Mints
	Coffee	

While the party was standing at the long table Rev. R. O. Wickham, of Latayette, delivered the invocation. Then full justice was done the edibles and while the guests were yet seated Editor T. C. Underwood, famous as an after-dinner speaker, responded in his usual happy fashion, paying a very deserved compliment to the host of the occasion, Mr. Metcalf, and referred humorously to the combination, the Physician, the Druggist and the man who furnished the floral designs.

Mr. Bayard Vasey was called upon and put everybody in a good humor with "Tipperary."

The members then repaired to the place of meeting where the following program was carried out with interest to all present.

R. R. Wood: "The U. S. P. and N. S. Propaganda Movement and the Dispensing Physician from the Pharmacist's Viewpoint."

J. L. Barker: "The Doctor and the Druggist."

E. H. Higgins: "The Relation of Druggist and Physician."

J. H. Rice: "The Relation of Physician and Druggist."

These papers were very lengthily discussed, nearly every one present taking part.

W. S. SNADBACH, Secretary.

Floyd—The Floyd County Medical Society met January 9th, 1915, at Wayland, Floyd county.

The meeting was called to order by E. H. Maggard, temporary chairman.

The following members were present: E. H. Maggard, M. V. Wicker, M. M. Collins, J. H. Allen, T. J. Chandler, T. T. Webb, John Williams, E. K. May, A. C. Hogans, Curtis Slone, G. C. Collins, H. G. Collins.

Motion was duly made, carried and E. H. Maggard was elected permanent chairman.

The following officers were elected: E. H. Maggard, President; M. M. Collins, Vice President; M. V. Wicker, Secretary and Treasurer.

Motion moved and carried that this be made a permanent society of Floyd County, and to ask the State Board of Health to recognize it as such.

Motion made and carried that this society meet on February 5th, 1915.

Motion made and carried to adjourn until the next meeting.

M. V. WICKER, Secretary.

Hardin—The Hardin County Medical Society met at Elizabethtown January 14, 1915.

Election of officers resulted as follows: J. H. Glascock, President; J. C. Mobley, Vice President; R. T. Layman, Secretary-Treasurer; D. E. McClure Delegate to State Society; J. W. O'Connor, Alternate.

C. Z. Aud reported a fracture of neck of femur in a woman 80 years of age. He placed patient on a double inclined plane, and used no permanent dressing. Fracture united but was re-broken. She also had Charcot's knee.

D. E. McClure in discussion reported two similar cases. One 77 years old was placed on her back with no permanent dressings and is now able to walk. The other patient, 88 years old, was placed in the most comfortable position without permanent dressing, and after living one year died of pneumonia.

F. P. Strickler: I have had quite a number of cases of this kind and I used to employ permanent dressings and had only one to die of hypostatic pneumonia. The simplest and best is to make them as comfortable as can be gotten along with and enough extension to get as near proximity without much pain.

I doubt the diagnosis of Charcot's knee, and I think it is probably a tubercular joint. I would oppose amputation for Charcot's knee, as I think such procedure only hastens death and never does any good. An adjustable chair is one of the best devices for this condition.

C. W. Rogers: I have two cases and had a splint made which placed the patient in one position and as a result pneumonia developed. We then used the double inclined plane and could elevate limb and lower the body or reverse as needed. This gave good results.

J. W. O'Connor: I had a case of fractured neck of femur in a man 80 years old and I used sandbags and pillows with extension for several days. I had no complications or shortening.

Another case I had would not tolerate extension, and we put him in permanent dressing without good results. I believe comfort is to be considered in these cases of old people and no permanent dressings should be used. In younger people extension is better.

J. M. English: The only case in an old person I ever saw would not submit to a permanent dressing and I predicted she would die, but she recovered, although she has much trouble with it yet.

I believe Dr. Aud's treatment is good and is about such as I would use in similar conditions.

C. Z. Aud, (In Closing): I believe amputation is the only chance for cure in Charcot's joints with the author's to the contrary. There are no authorities, only authors. I believe you young men will see the day when you will amputate for the cure of Charcot's joints.

J. W. O'Connor reported a case of impacted fracture of hip-joint, aged 40, who refused to

have extension, or fixed dressing. It resulted in fairly good condition with but little shortening.

C. Z. Aud: You should not disturb impacted fractures, especially in older people

D. E. McClure also thought impacted fractures should not be manipulated but should be let alone.

C. W. Rogers: I had a case of fracture of the shaft of femur. I first used a temporary dressing until after a fairly good union was knitting together the fractured ends and I then used a permanent dressing. Had a perfect result.

R. T. Layman reported a fracture of elbow joint although manipulation was resorted to, and he had the assistance of another physician in reducing the fracture.

R. T. LAYMAN, Secretary.

Mason—The Mason County Medical Society met in this city, on Wednesday evening, January 20th, 1915, at the office of Miss Annie M. Casey, Court Street, visiting Health Nurse in this county.

The following members were present: Drs. Taylor, Harover, Samuels, Quigley, Yazell, Haulbee, and Cooper. This being the meeting for the election of officers for the ensuing year, the President called the election, which resulted as follows: President, J. H. Samuels; Vice President, W. S. Yazell; Secretary-Treasurer, J. R. Cooper.

Woodson Taulbee read an interesting paper on "Autointoxication in Its Relation to Arterio-Sclerosis."

J. R. Cooper read a paper on "The Treatment of Cancer by Physical Methods With and Without Surgery."

Both papers were appreciated and discussed by the members present.

I am going to do all I can to bring the Mason County Society to the front for the year 1915, and to make the meetings interesting and profitable. The society meets Wednesday evening of each week. There being no further business, the meeting adjourned to meet January 27, 1915.

J. R. COOPER, Secretary.

Robertson—The following officers and members of the Robertson County Medical Society were called in session this January 4th, 1915, for the purpose of election of officers for the ensuing year: Judge E. Woodward, ex officio, Dr. Alton Wells and W. S. Chandler.

The meeting was called to order in the office of Dr. Alton Wells at 1:30 P. M., and as the President, J. B. Wood, was not present, Alton Wells was made temporary chairman, W. S. Chandler acting as secretary.

On motion of Judge Woodward, Alton Wells was nominated permanent chairman for the ensuing term, and W. S. Chandler secretary and treasurer. Carried.

Judge E. Woodward was requested to bring the

matter before the fiscal court at its next meeting and suggest that they elect a member to act with the present society in such matters as might come before it.

W. S. Chandler moved, and seconded by Judge Woodward, that the rules and regulations of the State Board of Health, as mentioned on pages 505 and 529 of the Biennial Reports for 1910 and 1911, be enforced. Carried.

There being no other business to come before the society it was moved to adjourn to meet at 1:30 P. M., on the 3rd Monday in the present month.

W. S. CHANDLER, Secretary.

McCracken—The McCracken County Medical Society met in regular session at the Board of Trade rooms, City National Bank Building, Wednesday evening, February 24th, 1915, with President E. B. Willingham in the chair and thirteen other members present.

C. E. Purcell presented an interesting clinical case, a man fifty years of age, who had a sacromatous growth involving tonsils and adjacent parts, with consequent involvement of cervical lymphatics.

J. T. Reddick presented a clinical case, that of a little girl, aged five, w.k.e., for almost one year had had dyspnoea, loss of voice, and occasional extreme attacks of dyspnea and excessive air hunger in which it seemed she would die. Her tonsils and adenoids had been removed and other treatment followed out as appeared indicated, without apparent effect.

C. E. Purcell expressed an opinion, in fact said he knew from examination that she had a growth pressing on larynx.

V. L. Powell of I. C. R. R. Hospital, read the paper of the evening, "Pleurisy and Its Complications," a well written and interesting paper which showed study. The paper was discussed by O. R. Kidd, Boyd, Reddick, Willingham and others.

J. T. Reddick reported a case of renal tumor recently operated upon, and gave a short paper the result of his studies on renal tumors in general.

J. T. REDDICK, Secretary.

Montgomery—The Montgomery County Medical Society met at the office of Dr. Bush. Meeting called to order by Dr. Bush, Vice President. Present, Drs. Bush, Shirley, May, Lockhart and Jones, Duerson and McKenna came in later.

Dr. Reynolds phoned that he could not come; a few days ago he was thrown from a horse and fractured his left arm.

Minutes of the December meeting read and approved.

R. E. May reported a case of a lady who had had a number of attacks of gall-stone colic. On Sunday, the 10th, she went to Louisville for an operation Yesterday (Monday) at 2:30 P. M.

Dr. May had a telephone talk with Dr. Abell saying that he would operate this morning. The patient was in good condition but her pulse was a little irregular, likely due to the approaching operation. At 5:30 another telephone conversation stated that she had an attack of heart block and likely would not live through the night. This morning she was living but in a bad condition.

J. F. Jones read a paper on "Notes on Two Hundred and Four Cases of Labor with Two Hundred and Eight Births," and some other notes. Some other notes was an expression of thanks to the Montgomery County Medical Society for a fine umbrella with a gold handle inlaid with pearl and having this inscription on the handle: "Dr. J. S. Jones from Montgomery County Medical Society, December 25th, 1914, and he assured the society that he appreciated the gift, but far above the gift was the esteem that his professional brethren had for him that caused them to bestow the gift.

This was the regular meeting for the payment of State dues but no one made a payment.

Mrs. Bush, wife of our Vice President, surprised him and those of us who were present by serving us with a nice lunch for which a vote of thanks was tendered her.

The Program Committee made the following report: January 12th, **J. F. Jones** will read a paper entitled, "Notes on Obstetrics."

C. B. Duerson and **Bush** will open discussions. Society to meet with Dr. Bush.

J. F. Lockhart on February 9th will have a paper on "Early Diagnosis of Tuberculosis," including the tuberculin tests and the treatment.

B. F. Thompson and **W. T. Willis** will open discussion. Will meet with Dr. Willis.

C. B. Duerson on March 9th, will have a paper on "Temporary Glycosuria"

J. A. Shirley and **R. E. May** will open the discussion. Meeting will be held with Dr. Shirley.

J. F. JONES, Secretary.

McCracken—The annual election of officers of the McCracken County Medical Society was held December 23rd, 1914, and resulted as follows:

President, E. B. Willingham; Vice President, E. W. Jackson; Secretary, Delia Caldwell; Treasurer, H. P. Linn; Censor, P. H. Stewart; Delegate, J. T. Reddick, all of Paducah.

Delia Caldwell declined to further act as secretary, and Dr. Reddick was later elected to fill that office.

Thomas E. Moss, of Woodville, sent a most interesting and excellent paper on "Leprosy in the Philippine Islands" which was read by the Secretary. Dr. Moss was in the employ of the U. S. Government for a number of years in the Philippine Islands as Suregon and Health Officer and saw quite a large number of cases of leprosy.

The regular attendants of the McCracken County Medical Society have promised to put more vim, vigor and vitality in the society this year

than it has for some time. It is to be hoped that all will become more enthusiastic and that our society will do some really good work this year.

Dr. Caldwell, who has been a most faithful secretary for several years has been very ill for a few weeks and her many friends in and out of the profession wish that she may have a prompt and permanent recovery.

J. T. REDDICK, Secretary.

Magoffin—The Magoffin County Medical Society met in the office of the Secretary, M. C. Kash, in Salyersville, on February 6th, 1915.

The President, R. C. Adams, called the meeting to order and after the reading of the minutes of the last meeting, the following physicians answered present: Drs. R. C. Adams, M. C. Kash, J. S. Cisco, M. M. Price, Wallis Bailey and B. F. Dixon.

After discussions at length on fees, mileage, retention and charity work, the following papers were read and discussed by all the members present:

R. C. Adams read a very interesting paper on "Lobar Pneumonia," which brought out some very interesting discussions, as that disease is now very prevalent in this community, especially among children.

M. C. Kash read a paper on "Sciatic Neuritis" from his own experience.

The two papers above named were sent to the JOURNAL for publication.

This was a very interesting meeting and all the physicians of the county have promised to be present, if possible, at subsequent meetings.

There is a plan on foot now to have a banquet some time in the spring at which all the doctors, their wives and sweethearts will have an outdoor picnic.

There being no further business, the meeting was then adjourned to meet the first Saturday in next month.

M. C. KASH, Secretary.

Owen—The Owen County Medical Society met at the office of Drs. Foster & McBee, on January 7th, 1915.

Members present, Drs. A. E. Threlkeld, J. C. B. Foster, George Purdy, W. E. Foster, J. W. Botts, K. S. McBee and J. H. Chrisman.

J. C. B. Foster, reported a peculiar case in a young man of 20, who was seized with a sudden attack in the field and lay unconscious for thirty minutes. He was apparently healthy, except he had shortness of breath, trouble attributed to excessive use of cigarettes.

J. C. B. Foster read a very able and instructive paper on "Pneumonia," which was discussed by all members present.

A. E. Threlkeld read a very interesting paper on "Twilight Sleep."

Program for the February meeting is as follows:

George Purdy will read a paper on the "Social Evil."

Discussion to be by the society.

•A paper on "Systemic Diseases from Mouth Infection." Discussion by the society.

J. H. CHRISMAN, Secretary.

Oldham—The annual election of officers of the Oldham County Medical Society was held in December. The following are the new officers for 1915:

C. N. Goldsborough, President; C. L. Hancock, Vice President; E. D. Burnett, Secretary and Treasurer; R. B. Cassady, Member of Board of Censors; E. D. Burnett, Delegate to State Society in 1915; R. B. Cassady, Alternate Delegate.

H. J. Farbach, Louisville, addressed the society on the use of neosalvarsan in the treatment of syphilis.

J. E. L. Harbold, the retiring president, delivered an interesting address.

It is the general feeling that 1914 has been a good year with the society.

H. B. Blaydes at the January meeting read a paper on "Post-partum Hemorrhage." This was freely discussed and enjoyed.

E. D. Burnett, at the February meeting, read a paper on "Catarrhal Fever," pointing out the difference between pseudo influenza and influenza vera.

Either the bad weather or busy doctors, or both, has made our January and February meetings small.

E. D. BURNETT, Secretary.

Pike—The Pike County Medical Society met January 2nd, 1915, at Judge H. H. Stallard's office. Dr. Stallard elected President pro tem. Minutes of our last meeting read and approved as read. The program for our next meeting is as follows:

Z. A. Thompson, to read a paper on "Fractures of Lower Extremities."

P. C. Sanders, a paper on "Delivery of Placenta."

The application of O. K. Bond was read and accepted.

The following members were present and paid their dues: J. W. Stephenson, P. C. Sanders, H. H. Stallard, Zack A. Thompson and W. J. Walters.

The following officers were elected for 1915: President, P. C. Sanders; Vice President, H. H. Stallard; Secretary-Treasurer, W. J. Walters.

Meeting was adjourned until the first Monday night in February, 1915.

W. J. WALTERS, Secretary.

Pendleton—The Pendleton County Medical Society met in Butler, February 10th, with the following members present: Beckett, Clark, Dough-

erty, Hopkins, Nichols, John E. Wilson, A. E. Cram, H. M. Blades

Minutes of the last meeting not present to read. No unfinished business.

Next came a discussion of the late Anti-Narcotic Law in order to become familiar with same. No new business.

J. E. Wilson read a paper on "Pneumonia."

O. W. Brown, Caldwell and others discussed the paper.

S. M. Hopkins read a paper on "Catarrhal Pneumonia."

H. C. Clark and **O. W. Brown** lead in the discussions.

Resolution offered by Dr Clark on fee scale.

H. C. Clark reported a case of a dermoid cyst.

O. W. Brown reported a case as follows: A man with colicky pain, on first visit, peculiar tense abdomen. Second visit, vomiting freely, pulse 80 to 100, sub-normal temperature. No improvement for several days. Obstruction of bowels. Opened and found intussusception and peritonitis, white tubercular nodules.

W. A. McKENNEY, Secretary.

Shelby—The Shelby County Medical Society held its regular monthly meeting the third Thursday in February, the 18th, with the following members present: Dr J. N. Smith, President; Lawrence, McMurry, F. M. Beard, Austin, Perrin, Ray, E. B. Smith, S. L. Beard, Hughes, Allen and Mr. Grant Smith, the druggist, and Dr. Owry of the Glyco-thymoline Company. Dr. J. H. F. Duff, of Jacksonville, was unanimously elected to membership in this society.

E. B. Smith, our homeopathic brother, gave one of his delightful and highly interesting talks on "The Safe Administration of Drugs," making a strong plea for pure drugs of known and definite strength, this talk was fully up to the well known Smith standard for interest and efficiency and from the discussion evoked showed that the profession is awakening to the necessity of using "Instruments of precision" in its warfare on disease.

Mr. Grant Smith explained the working of the new Narcotic Law to the society.

Frank M. Beard entertained the society and did the honors with his customary lavishness as to menu and courtesy to the members.

The following paid dues for 1915: S. L. Beard, W. P. Hughes, Graham, Laurence Curtis, Austin, W. R. Ray, J. N. Smith, J. H. F. Duff, Joe Perrin.

The society then adjourned to meet again in March.

W. E. ALLEN, Secretary.

Simpson—The Simpson County Medical Society met in the directors' room of the McElwain-Meguiar Bank, Franklin, January 4, 1915, at 2:00 P. M. Organized for business with President E. K. Lamb in the chair.

After the reading and adoption of the minutes

of the previous meeting, the election of officers for 1915 was held, with the following result:

E. K. Lamb, President; **W. H. Williams**, Secretary-Treasurer; **S. R. Guthrie**, Censor for Three Years; **W. A. Guthrie**, Delegate to State Meeting for Two Years; **C. L. Venable**, Alternate.

The meeting was highly optimistic.

Every man present was agreed as to the value of such meetings and pledged himself to attend every one possible throughout the year.

C. L. Venable was assigned the role of essayist for the February meeting.

N. C. WITT, Secretary.

Taylor—The Taylor County Medical Society met in the office of the Secretary January 7, 1915. Present, Drs. Buchanan, Black, S. H. Kelsay, O. M. Kelsay, Hiestand, Gowdy and Atkinson.

The program for this meeting was written reports of cases by all the members, and was productive of some splendid reports, and a very successful meeting.

J. B. Buchanan reported several cases of chancre, in some of which the lesions were difficult to find, being located in the folds of the prepuce. He also reported several cases of oral chancre. His purpose was to impress the danger of infection from oral chancre and especially from infected servants. Dr. Gowdy mentioned the great prevalence of syphilis and also reported on some cases he had recently seen.

C. V. Hiestand reported a case of orchitis in a young man followed by development of mumps in the other member of the family. In the young man there was no involvement of the parotid.

E. L. Gowdy reported a case of typhoid fever in a child 2 years old and calls attention to the numerous cases of typhoid fever in children.

In the discussion of the reports of Dr. Buchanan, Drs. Black and Atkinson think that a family who employs a syphilitic servant should be warned of danger by the attending physician. Dr. Hiestand thinks the infected servant should be instructed not to work in any family till all lesions are healed.

J. L. Atkinson reported a case of hysterical contraction of muscles of forearm and hand. He also reported the successful treatment of a case of acne, complicated with obstinate styes on both eyes, with staphylo-acne bacterin.

O. M. Kelsay, reported two cases of recurring fever in children both of which he diagnosed as malarial.

B. T. Black reported case of a man who had recurring attacks of unconsciousness and aphasia. Also showed some facial paralysis. The attacks of unconsciousness pass, followed by aphasia, which are not permanent but his speech is not distinct, pupils are dilated, and cannot express himself correctly.

J. B. Buchanan reported that he had talked with Dr. Thornton of Lebanon in regard to the Physicians Protective Association. He said that Dr. Thornton would come down and explain the

work of the association which has for its purpose the elimination of dead-beats from the doctors charity list. The society directed the secretary to invite Dr. Thornton to attend the February meeting.

J. B. Buchanan for the program for February meeting will read a paper on the "Outline Diagnosis and Treatment of Syphilis."

E. L. Gowdy will prepare a paper on "Auto-toxemia."

J. L. ATKINSON, Secretary.

Todd—The Todd County Medical Society met at Elkton, December 2nd, 1914. House called to order by President C. M. Gower. Minutes of the previous meeting read and adopted. This being the regular annual business meeting the society proceeded to the election of officers for the ensuing year. C. M. Gower, of Trenton was nominated and duly elected President; B. E. Boone, of Elkton, nominated and elected Vice President; L. P. Trabue, of Elkton, elected Secretary and Treasurer; R. L. Boyd, of Allensville, duly elected member Board of Censors. L. P. Trabue elected Delegate to State Meeting to be held at Louisville in 1915.

The following resolution was presented and read by C. M. Gower, of Trenton, and on motion was adopted by the society:

Whereas, the medical profession has always regarded an abortionist, or a physician who would willingly destroy an unborn child, as being a murderer and a criminal of the worst type, a disgrace to himself as well as to the entire profession, and

Whereas, There is constantly being circulated reports that some are engaged in this unlawful and disgraceful practice, thereby bringing shame and disgrace upon the time-honored profession of medicine. Therefore, be it

Resolved, That we, the Todd County Medical Society, do with all the power we possess, and in the strongest terms we know, condemn and denounce any one so engaged as being unworthy the name of physician, or the confidence or support of any community. An evil influence upon and dangerous to society. Be it further

Resolved, That we pledge ourselves as a society and as individuals to aid in every way possible the procuring of evidence against and exposure and prosecution of any one so engaged.

There being no further business, the meeting adjourned to meet at Elkton the first Wednesday in January, 1915.

L. P. TRABUE, Secretary.

Taylor—The Taylor County Medical Society met in the office of the Secretary, March 4, 1915.

There were present Drs. O. M. Kelsay, S. H. Kelsay, O. R. Reesor, B. T. Black, C. E. Murphy, W. R. Elrod, F. I. Buckner, E. L. Gowdy and J. L. Atkinson.

Motion prevailed that the April meeting be held on April 1st, instead of regular date on account of conflict with the April meeting of the Muldraugh Hill Society.

E. L. Gowdy read a paper entitled "Metabolic Disturbances of the Intestinal Tract, with Especial Reference to Food Intoxication of Infancy." Dr. Gowdy's paper was a full expose of his subject and indicated much study and research of current literature on dietetics and infant feeding. The members expressed a high appreciation of the paper.

We had interesting case reports by Drs. S. H. Kelsay, O. M. Kelsay and C. E. Murphy.

The Taylor County Medical Society is a real live one and we are expecting to do a good year's work.

Some of our members having expressed a desire to have some discussion of medical ethics, the secretary has asked Dr. Hiestand to prepare a paper on that subject for the April meeting. That, with a paper from Dr. Buchanan on "Diagnosis and Treatment of Syphilis," will make the program.

J. L. ATKINSON, Secretary.

Taylor—The Taylor County Medical Society met in the office of the Secretary. Those present were: Drs. Buchanan, Hiestand, O. M. Kelsay, Black, Buckner, Reesor, Gowdy and Atkinson, G. G. Thornton, of Lebanon, visiting.

G. G. Thornton was present on invitation of the society so the regular order was dispensed with and he was requested to read his paper, "The Doctor as a Business Man." The doctor's paper was highly commended and the doctor thanked for his paper and presence.

Motion prevailed that the other papers on the program be reserved for the March meeting, and after some business of local interest was transacted, the society adjourned.

J. L. Atkinson, Secretary.

Warren—The Warren County Medical Society met in the Council Chamber, Bowling Green, November 9th, 1914, with President T. W. Stone, in the chair. The following members were present: T. W. Stone, J. N. McCormack, A. T. McCormack, E. Rau, B. S. Rutherford, F. D. Cartwright, W. F. Arnold, G. E. Huddle, Jno. H. Blackburn, W. P. Drake, E. N. Hall, F. D. Reardon, J. H. Souther, W. H. Neel, L. H. South.

Drs. Davis and Wright elected new members by acclamation.

This being the regular meeting for the election of officers for the ensuing year, the scientific program was dispensed with. On a motion by Dr. A. T. McCormack, Dr. London was nominated for President and the secretary was instructed to cast the vote of the society in his favor. The remaining officers elected were: "First Vice-President, E. Rau; Second Vice-President, W. H.

Neel; Secretary-Treasurer, Burnett Wright; Delegate, B. S. Rutherford.

On motion by Dr. Arnold, a rising vote of thanks was accorded the retiring officers.

W. F. Arnold made a motion that the society acknowledge the commendable action of the Home Telephone Company, in establishing a service for the benefit of physicians and that a committee be appointed to confer with the Cumberland Telephone Company to bring about a similar service over their lines. Dr. Stone favored this plan and the motion was seconded and carried.

A. T. McCormack moved and it was seconded that the above acknowledgement be recorded in the minutes of the society.

The chair appointed the following as the committee, Drs. Blackburn, Reardon and Wright.

Burnett Wright reported a case of funnel-breast with photographic illustrations.

T. W. Stone reported two cases of thrombosis.

J. H. Blackburn discussed thrombosis. Dr. Arnold gave personal experience with this condition.

G. E. Huddle reported a case of "House-maid's Knee."

F. D. Cartwright reported pneumonia and appendicitis complicating a twin pregnancy.

E. Rau reported a case of severe iritis, remarkably free from pain. Discussed by Dr. Arnold.

There being no further business the society adjourned.

BURNETT WRIGHT, Secretary.

Warren—The Warren County Medical Society met in the Council Chamber at the City Hall, Bowling Green, on January 13th, 1915, with the President, Finis London, in the chair.

The following members were present: Finis London, B. S. Rutherford, T. W. Stone, W. F. Arnold, B. P. Davis, G. H. Freeman, J. W. Lewis, Carlisle Moss, W. H. Neel, J. L. Neel, W. P. Drake, Will Strother, J. F. Rogers, J. H. Blackburn, Burnett W. Wright.

On the occasion of his first appearance in the chair, the President, Dr. Finis London, made an appropriate talk, expressing his gratitude and appreciation for the honor conferred on him and pledging himself to the best interests of the society and the profession.

The minutes of the previous meeting were read and approved. W. F. Arnold arose to commend the manner in which they were submitted.

J. H. Blackburn outlined a plan for weekly meetings to take up the study of the subjects outlined by the Post-Graduate Course of the American Medical Association and suggested next Monday night for first meeting. This work to be in conjunction with the work of the Warren County Medical Society.

W. F. Arnold commended the plan and believed pathology should receive especial attention. Proposed securing a permanent home for the So-

ciety in order that the society might transact business and receive bequests. This was put in form of a motion.

J. F. Rogers asked about the cost and this was explained by Dr. Arnold.

T. W. Stone didn't favor the plan.

W. H. Neel asked for explanation and after a second, the motion was voted and carried.

B. S. Rutherford reported a case with pulmonary symptoms and undetermined cause of death. Discussed by W. F. Arnold.

B. S. Rutherford, the essayist, read a paper on "The Cause and Prevention of Puerperal Septicemia." The discussion of this interesting and instructive paper was opened by T. W. Stone. He had found most of his cases in the least expected and reported a case with a fatal termination. He emphasized (1) care of patient, (2) care of hands, and (3) care of third stage of labor. Does not use gloves and repairs all tears. Recalls that slightest abrasion may be seat of infection and favors douche. Sees most of cases in debilitated and exhausted women. Gives anti-streptococcic serum for its prophylactic effect and values it highly.

J. H. Blackburn read extracts from the Journal A. M. A., and from reports of vital statistics of Kentucky on the high mortality from puerperal septicemia.

B. W. Wright described unique method of delivering placenta as outlined in a recent medical distension of the villi with normal saline forced journal which consisted of separating placenta by into the umbilical vein.

There being no further business the society adjourned.

BURNETT WRIGHT, Secretary.

Wayne—The Wayne County Medical Society met on December 8th, 1914. After the social feature was over W. E. Woodrow was elected President of the Society for the year 1915; C. B. Rankin was elected Vice President; J. F. Young, Secretary and Treasurer. J. F. Young was elected Delegate to the Kentucky State Medical Association; W. E. Woodrow, Alternate. W. E. Woodrow was appointed for a paper for the next meeting.

J. F. YOUNG, Secretary.

Clinics of John B. Murphy, October, 1914.—Volume Three. Published by W. B. Saunders Company, Philadelphia.

Chapters on clinical talk and diagnosis is worth the price of this book for one year. Traumatic epilepsy, fecal fistula, Old Potts fractures are some of the most important chapters in this number.

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EDITORIAL.

OUR ANNUAL MEETING.

A letter from Dr. Henderson, the Secretary of the Jefferson County Medical Society, announces that the annual meeting of the State Association will be held in Louisville on Tuesday, Wednesday and Thursday, September 21, 22 and 23. The House of Delegates convenes on September 20. The interest shown in this meeting by the profession in Jefferson County promises much for its success, and we trust every doctor in the State will begin arranging now to be present.

DUES.

Send your dues to your county secretary. A very large amount of unnecessary correspondence has been caused this year by many of our physicians sending their dues direct to the State Secretary instead of sending them to the county secretary. This leads to endless confusion, and this notice is published so that many members will understand why they have failed to receive membership cards or why other complications have arisen. Send your dues to your county secretary directly.

THE HONORARY MEMBERS.

The constitution of the State Association does not provide for honorary members. Any county society which elects honorary members should include \$3.00 in their annual report as the per capita assessment for such members. Most of the societies understand this, and this editorial is given its annual repetition so those which have recently elected honorary members will be reminded of the constitutional provision.

THE KENTUCKY STATE ASSOCIATION OF RAILWAY SURGEONS.

It is a pleasure to announce the annual recurrence of the meeting of this splendid Association of which Dr. Jasper of Richmond is President and Dr. Kinnaird of Lancaster is secretary. The meeting will be held May 6-7, at the Seelbach in Louisville the two days which precede Derby Day. This is a most important meeting, for those members of the profession who are doing railway surgery. None of them can afford to miss it as it is an opportunity for the real improvement that always results from an interchange of experience.

THE SEVENTH PAN-AMERICAN CONGRESS.

The Seventh Pan-American Congress will convene in San Francisco June 17-21 inclusive. Our members will be interested in knowing that the American Medical Association will meet June 21-25 inclusive. During this time, those in attendance will not only have opportunity of attending the Pan-American Exposition, but will have the inspiration of attendance upon probably the greatest series of medical meetings that have ever been organized in the world. Dr. Charles A. L. Reed is president of the Pan-American Medical Congress, and this fact alone will warrant every physician who attends in expecting a first-class meeting in every respect. Dr. Reed is well known to the profession of Kentucky, being an honorary life member of our State Association and a personal friend of very many of our members who appreciate him as probably the most active and energetic force in American medicine. Any of our members who intend going to San Francisco can get such information as they desire in regard to routes and rates by writing to the JOURNAL.

FRACTURES AND DISLOCATIONS.

So frequent are the damage suits brought against physicians and surgeons because of fancied or real imperfect end results in fractures and dislocations, that the State Association at the request of of the Medico-Legal Committee of the Association at the Newport meeting wisely decided to arrange for a special post-graduate course on Fractures and Dislocations to be held at the University of Louisville Medical School.

The plans for this course have just been perfected and a letter has been prepared to be sent to the members of the State Association urging their attendance upon this course, and to take advantage of the week of clinics, May 31 to June 5, at the new Louisville City Hospital. The course and clinics will be complimentary to the members of the State Association and every member is urged to attend for at least a few days, making a special endeavor to be present at the meeting of the alumni of the Medical School, Monday, May 31.

Under the terms of the consolidation of the Louisville Medical Colleges, graduates of the component schools, the Louisville Medical College, Kentucky School of Medicine, and Medical Department of Kentucky University were made members of the Alumni of the University of Louisville and it is hoped that every alumnus will either attend or actively associate and interest himself in the organization.

The University of Louisville will hold a joint commencement this year of the Liberal Arts Department, the Medical School and Law School on June 3 at Macauley's Theater, the Commencement Week beginning with the Baccalaureate Sermon on Sunday, May 30, 1915.

As can be seen by the program for this course all features of this subject will be discussed. Special stress will be laid on the X-ray in its relation to the treatment of fractures, and a number of dissections on the cadaver will be demonstrated to illustrate the various fractures and their relations to the soft parts. The mechanical appliances for treatment of fracture will be carefully shown, and the various surgical procedures for treatment of ununited fractures given in detail.

The importance of this subject is so great that it does not admit of argument. The enthusiasm with which the surgical department of the University of Louisville has responded to the call of the Association for this course is highly commended, and we trust the members of the Association will show their appreciation by an enthusiastic attendance.

The following will be subjects of the various lectures and demonstrations: X-ray and Fractures, Forms of Fracture Diagnosis, Non-

union and repair, Treatment in general, Compound or open Fractures and Dislocations. Special Fractures (Jaw) and Dislocations, Injuries to Spine, Fractures of Sacrum and Coccyx, Ribs and Clavicle, Injuries and Dislocation of Shoulder, Injury and Dislocation of Elbow, Colles' Fractures, Fractures of Arm and Forearm, Injuries to Pelvis, Hip, Knee, Patella, Ankle, Special Appliances, Open Method. Medico Legal, Tarsal and Carpal and the Skull.

PRIZE OF \$1000.

Through the American Social Hygiene Association of 105 West 40th St., New York City, the Mutual Life Insurance Company has offered a prize of \$1000 to be awarded to the author of the best original pamphlet on social hygiene for adolescence between the Ages of Twelve and Sixteen Years. Competition for this prize is open to all. The Insurance Company desires to use the winning pamphlet among its industrial policy holders. The contest closes July 31, 1915, at midnight. Manuscripts must not exceed thirty-five hundred words, must be in English, and not have been previously published. They must be typewritten on one side only of plain white paper eight by ten and a half inches, and must be paragraphed and punctuated ready for the printer. Each paper must bear some identifying mark or pen-name but not the name of the author, which should be in a sealed envelope, accompanying the manuscript; the face of the manuscript bearing the mark or pen name only.

The question most frequently asked by those interested in the competition are: "What kind of pamphlet is wanted? Is it to be written for boys, or for girls, or for both—or for parents? Must it cover the entire period of the four years specified? Must it take up the physiological changes of adolescence? What sort of instruction may the author assume that the child has had before reading the pamphlet?" To such inquiries the reply is that the prize has been offered for the best solution of the problem of approaching through the printed word the youth of America. If the author is convinced that the indirect approach through the parent is the proper method, he may prepare his manuscript for use by the parent. If he prefers preparing his pamphlet for use by boys or girls or thinks he can best combine the information into a single pamphlet for the use of both boys and girls, then he should adopt one of these routes.

It is generally recognized that the early adolescent period in the life of both boys and girls presents one of the most difficult problems in educational work. In the special field

of instruction or education with which the social hygiene movement deals, this period is probably the most difficult. The problem of the early adolescent period still awaits a satisfactory solution. THE JOURNAL hopes some one of its readers may become sufficiently interested to secure this prize.

DISINFECTION.

The most practical, effective and cheapest disinfectant is formaldehyde gas. Since the war it has been too expensive for general use, but the State Board of Health of Pennsylvania announces a simple and cheap method of generating the gas. To each pint of the official formaldehyde solution add 1 1-2 ounces each of commercial sulphuric acid and glycerine. In a flat bottomed disinfecting pan spread ten ounces (avoirdupois) of sodium dichromate in a thin layer. Pour the prepared formaldehyde-acid-glycerine solution into the vessel and make a quick departure from the room. It is important that the potassium dichromate be kept tightly sealed in containers which protect it from moisture, and in cold weather the liquid mixture, should be kept in a room considerably above freezing.

The reaction resulting from the release of the gases is more rapid than by the older methods and the deposit remaining in the containers is more corrosive. For this reason all containers should be removed from the room one-half hour after starting the disinfecting process, and the deposit should then be removed and the vessel thoroughly washed out with soap and water. The importance of pasting paper over all openings in windows, doors, and fire places is to be remembered. For each 1000 cubic feet of space to be disinfected, use 19 ounces of the solution and 10 ounces of potassium dichromate.

This method of formaldehyde gas disinfection—to be known as the Pennsylvania method—has been adopted by the State Board of Health as the official method of disinfection to be used by the health authorities and people of Kentucky.

PHYSICIANS AND TUBERCULOSIS.

The National Association for the Study and prevention of Tuberculosis announces through its executive secretary the inauguration of a movement to bring attention to the importance of improving the teaching on consumption in medical colleges and that an effort will also be made to reach individual practitioners by special bulletins prepared for this purpose. Such a movement is of considerable interest and is bound to succeed because the best time to teach anything is during the younger years and in the formative period of life.

SCIENTIFIC EDITORIALS.

INTESTINAL OBSTRUCTION CAUSED BY MECKEL'S DIVERTICULUM.

Meckel's diverticulum is due to the persistence, or incomplete obliteration, of the omphalo-mesenteric duct. It may consist of a tube similar in structure to the intestine, extending from the lower part of the ileum to the umbilicus, or obliteration may be partial leaving the tube patent a varying distance from the small gut. Its average length is two to three inches. In structure it is like the small intestine, possessing a mucous, muscular and serous coat. It is always single, and arises from the intestine opposite to the mesenteric attachment. It usually arises from the ileum within thirty-six inches of the ileocecal valve, rarely nearer the valve than ten or twelve inches. The end of the diverticulum is usually free, but it may be connected with the umbilicus by a solid cord. However, this



cord may break loose from the umbilicus and float free in the abdominal cavity, or become attached at some other point.

Several methods by which Meckel's diverticulum produce intestinal obstruction are given.

1. A coil of intestine may be strangulated under a partially obliterated duct the same as under a peritoneal adhesion.

2. A long and loose diverticular ligament, though attached at both ends, may form a noose and produce strangulation by ensnaring a loop of intestine.

3. The diverticulum may form a knot about a loop of intestine, causing strangulation. It is supposed that the diverticulum, to produce this form of obstruction, must be long, attached only at the intestinal end and possess an ampulla at the other extremity. stress is laid upon the action of the ampulla in producing these knots about the intestine.

4. The bowel may be strangulated over a diverticular band, the mechanism being the same as if a thin rubber tube were hung over a tense cord.

5. Strangulation may be produced by kinking of the intestine. The diverticulum may exert enough traction upon the ileum to cause an acute bending at their point of juncture, thus obstructing it.

6. Diverticulum as a cause of, or associated with intussusception. The invagination usually starts with the diverticulum.

7. Volvulus of the diverticulum. The twisting finally involves the ileum at the juncture with the diverticulum.

8. Stenosis of the bowel at the diverticular juncture. Congenital strictures of the lesser bowel are most frequently met with in the region of its juncture with the omphalomesenteric duct, and it is believed that they are due to excessive changes incident to the obliteration of this duct.

REPORT OF CASE.

R. C., age 11 years. Family and previous history negative. Well developed boy. On July 4, 1912, ate indiscreetly and had an attack of colic. His mother used home remedies and did not call a doctor. Was sick two or three days and apparently recovered fully. At 8 a. m., on July 26, 1913, after usual breakfast complained of cramping and nausea and vomited contents of stomach. Felt so badly that he voluntarily went to bed. Refused food the rest of the day and vomited slightly several times. I saw him at 7 p. m. At that time his temperature was 96 degrees F., pulse 108, and somewhat irregular. Facial expression was anxious. Abdomen was not distended. A sausage shaped tumor could be distinctly felt in the right iliac region. A diagnosis of either appendicitis or an intussusception was made and operation advised and accepted. At 9 p. m., assisted by Drs. W. H. Smith and O. L. May the abdomen was opened and an intussusception of the last ten or twelve inches of the ileum through the ileocecal valve was found. The ileum was tightly grasped by the ileo-cecal valve and the invaginated portion of the ileum was distended with gas. Repeated efforts were made to reduce the invaginated gut, but with no success, and resection seemed the only course left. The distension of the invaginated portion of the ileum was so marked that it was decided to attempt to relieve this by puncture before attempting a resection. A sterile hypodermic needle was plunged through the cecum at the most distended point, and the result was most striking. As the gas escaped and the distension subsided there was no difficulty whatever experienced in reducing the intussusception. As the terminal end of the invagination appeared, a dark button-like tumor came into view, which on examination proved to be a Meckel's diverticulum. The two photographs show this interesting specimen, one from the mucous side and the other in cross section. A Lembert stitch was passed around the needle puncture in the cecum, but the two punctures through the intussusception could not be located. The diverticulum was removed and a

running catgut stitch passed through the cut edges of the stump to prevent haemorrhage, the peritoneum brought over this with a few Lembert stitches, and the abdominal wound closed. So little damage had been done to the intestine that convalescence was uneventful and the boy has remained in good health since.

F. H. MONTGOMERY.

WHAT THE PRACTITIONER SHOULD KNOW ABOUT X-RAY ERYTHEMAS.

Ten years ago we had our first experience with an X-ray burn: one not entirely our fault either. We were compelled to apply the X-ray to a patient with a severe case of *Tie Douloureux*. The patient had a very sensitive skin, and I was not inclined to use the X-ray, but the physician in charge of the case insisted upon it and the result was a severe X-ray dermatitis. The patient for a while was relieved of *Tie Douloureux* pains, but we had a hard time to rid her of the dermatitis. Under careful treatment we had no bad consequences. Since then we have made it a rule to apply X-ray only in pathological cases, and then we have used the utmost care to avoid any ill consequences.

Since the X-ray has become a very important factor in diagnosis and therapy of certain diseases we will give the reader some important points as noticed by us in experiences covering a period of twelve years. The reaction of the skin caused by the action of the X-ray has such a characteristic beginning, course and end that under favorable conditions it should be easily recognized. The most important point to remember in the usage of the X-ray is that the reaction does not come at once. It may come in twenty-four hours or later. The reaction is rather a "latent" one. The sooner the reaction appears, the stronger must have been the application of the X-ray.

We must distinguish four degrees of reaction:

First Degree: The latent period lasts about three weeks and the reaction is expressed by falling out of the hair, slight scaling, and feeling of heat, without visible inflammatory appearances; this condition lasts from one to three weeks and disappears without having any sequelae except a slight temporary pigmentation.

Second Degree: After a latent period lasting two weeks there appears a hyperemia, with a dropsical-like condition, infiltration of the skin, falling out of the hair, pruritus, feeling of heat and sharp pains; the inflammatory appearance lasts from three to six weeks and afterwards leaves pigmentation and a slight localized scaling which, after a certain time,

disappears; but at times we may have hard telangiectasis as a sequelae.

Third Degree: The latent period lasts about a week; soon there is observed severe pains, a persistent characteristic redness, oedema of the skin, vesiculation, excoriation, and falling out of the hair; the reaction lasts from one and a half to three months and leads to destruction of follicles, fat and sweat glands in greater or lesser degree, with formation of pigmented sections and bald spots. Sometimes after an apparent recovery inflammatory reactions may occur in the course of one or two years, in consequence of which there may be the beginning of formation of necrotic processes, scars and telangiectasis.

Fourth Degree: Erythema appears within from two to eight days, giving a dark violet-red color with various pigmentations; bulli and excoriations appear; a great many areas of the skin may become more or less necrotic; the pains are very severe. This may result in atrophy of the skin, telangiectasis, alopecia, or prominent hard scars which sometimes lead to ugly deformities. The center of the skin which has been X-rayed is usually the more strongly affected.

From the above described forms of reaction which usually occur from improper administration of X-ray doses and which are called by Braur "secondary effects," we must differentiate the so-called "early" and prolonged type, as described by Speder, Freund and others. The latter forms of X-ray reaction are characterized by the appearance of an X-ray ulcer with a prodromal dermatitis, from four to twelve months after the administration. Such burns or reactions have been particularly noticed on the abdomen and back with inflammatory processes affecting the deeper structures and blood vessels.

It must be also remembered that the skin which has suffered from a dermatitis following the administration of the X-ray, is liable to react from all sorts of irritations (mechanical, thermic and chemical), and this reaction may cause ulceration which is particularly prone to degenerate into malignancy.

M. L. RAVITCH.

Coxitis.—Three cases of coxitis in which there was an apparent relationship between faulty posture or intestinal derangements and coxitis, the discovery of which relationship rendered needless any prolonged local treatment, are reported by R. B. Osgood, Boston, (*Journal A. M. A.*, Dec. 19, 1914). It is possible, he says, that if the experience of others coincides with his, the physician can be saved much anxiety and some families be spared the distress which a diagnosis of tuberculosis gives, and the patient saved a prolonged and irksome treatment.

ORIGINAL ARTICLES

HISTORY OF FADS AND FANCIES IN MEDICINES.*

By JOHN E. L. HARBOLD, La Grange.

Permit me in a very brief manner to speak of the history and some of the fads of medicine. As far back as the written history of medicine can be traced: there have been fads and fashions. Some one has said, "There is nothing new under the sun." When we read the archaic history of medicine this expression is very forcibly brought to mind. The Egyptians are among the first of ancient nations to keep a record of what was done in medicine. In those days the Priests were the principal doctors: they were the learned ones: though others practiced medicine.

The surgeons of to-day must not think that there were no surgeons in ancient times. On the walls of the ruined temples of Amen of Thebes there are baso-reliefs displaying surgical instruments: not very unlike some in use in modern times.

The Egyptian physicians plugged cavities of teeth with gold, as has been proven by mummies with gold plugs in their teeth.

They performed lithotomy both by suprapubic and perineal operation. They operated successfully for cataract. They were expert in bandaging as the mummies show.

There are, and have been, many different schools or sects in medicine: but there are only three at present who are sufficiently large to have a national association.

We will now note some of the fads that have passed and also some that are with us now.

Beginning with the time of our independence, the first fad we will notice, bleeding, purging and vomiting considered together as one great fad. In the early years of our independence there were few medical schools. The majority of the doctors in those days studied a few years under preceptor then he began to practice medicine without attending a school.

Thomas Jefferson, writing to Dr. Wistar, declared he had seen the various schools and theories of medicine, "Disciples of Hoffman, Boerhave, Stahl, Cullen and Brown, succeed each other like the shifting figures in a magic lantern, and their fancies, like the dresses of the annual doll-babies from Paris, becoming from their novelty the vogue of the day, and yielding to the novelty of the ephemeral favors."

Bleeding continued until about 1820 when it began to wane. So firm was this fad established that they thought blood must flow: so

*Read before the Oldham County Medical Society.

in lieu of the lancet, cuping and leeches came into use. As late as 1841 Dr. Sleight, a physician of Philadelphia, while holding a public discussion asserted that five-sixths of the blood was superfluous, and being loaded with seeds of disease it was better discharged from the body. In 1874 or 1875 the American Medical Association met in Louisville. I heard Dr. S. D. Gross read a paper on "The Lost Art in Medicine," that was bleeding. I believe we do not bleed enough. I am satisfied that I have saved three lives by bleeding. But the fad has passed.

There are other fashions and fads and now let us notice the great fashion: surgery. For a number of years this fashion has held sway: one day the young man is awarded his diploma: the next day he is a specialist in surgery: performing all the operations as they may come. Two very eminent surgeons have declared that surgery is on the wane, that thousands of operations are performed which should not have been. So great is the rage to operate that one or two states have passed, or the bills were introduced, making it a severe penalty to operate when there was no need of the operation. The trend of articles in medical journals show surgery is on the wane. Some years ago ovariectomy was the fashion, now appendicitis is the rage.

I am certain that many ovaries and appendices have been removed which should not have been.

Some time ago I saw in a medical journal a table quoted from the French army record: Six hundred cases were reported of appendicitis; 400 were not operated on, death rate less than three per cent; 200 were operated on, death rate between 10 and 11 per cent.

We should pay more attention to internal medicine and therapeutics and the action of drugs.

For years the old school ridiculed the teaching of Hahneman: that "like cured like."

Now for our newest fad, serums. When we use serums I believe we get very near the teaching of Hahneman. For those serums as I understand it, each serum or bacterin contain the germs of the disease we wish to cure.

In conclusion, I thank you for the honor conferred upon me when you elected me president of our society. Also for the support and encouragement you have given me. I hope you will give my successor the same support and encouragement. Our meetings have been pleasant and profitable and trust they will continue thus.

DIAGNOSIS, MANAGEMENT AND TREATMENT OF LOBAR PNEUMONIA.*

By R. C. ADAMS, Salyersville,

Lobar pneumonia, an acute infectious, croupous inflammation involving the vesicular structure of the lung, characterized by a severe chill, headache, fever, thoracic pain, dyspnoea, cough, rusty sputum, and great prostration.

Cause: Croupous pneumonia is an infective disease; all ages are liable. As a rule males are more liable than females, and again one attack predisposes to another, as a general rule, debilitating individuals are more susceptible. Lobar pneumonia is most frequent in winter at times occurring epidemically the result of atmospheric changes and condition, exposures to draughts and cold, damp weather, gout, rheumatism, diabetes and Bright's disease.

Pathological Anatomy: The most frequent seat being the lower right lobe, the next most frequent seat being the lower left lobe, the next subject to affection is the upper right lobe of lung, although I have found it true in a number of children and in aged patients this lobe is affected equally as often as the right lower lobe. In all patients we find the changes are thus divided, first stage is that of hyperemia or (engorgement) second stage is that of exudation (or red hepatization) third or last stage is that of resolution, or (gray hepatization) or it may undergo purulent transformation or the development of abscess in such case it would be termed yellow hepatization.

I do not think it necessary to go into pathological detail as the average country practitioner is familiar with the pathological stages of this disease. It is true in a number of cases abscess of the lung may result from the lung structure becoming involved in purulent disintegration, abscess may be solitary or in great numbers, these abscesses may terminate fatally or open into the pleural cavity causing empyema and exhaustion, or open into the bronchi and expectorated, in some cases an intestinal pneumonia may develop in many cases of blocking up of the bronchial or pulmonary arteries, causes gangrene. In my opinion this may occur at any stage of the disease, and again, death may result from general oedema of the unaffected lung. Such cases often erroneously termed double pneumonia. If inflammation of the pleura be associated with a pneumonia the so-called pleuro-pneumonia, the changes in the pulmonary pleura are characteristic.

The duration of the stages are thus named;

*Read before the Magoffin County Medical Society.

stage of congestion lasts from one to three days, stage of exudation from three to seven days, stage of resolution from seven days to three weeks. In some cases of young and very old or depressed I have seen the stage of red hepatization develop in forty-eight hours. Symptoms begin with a chill followed with a rapid rise of temperature 103 to 104, full rapid pulse, embarrassed respiration, and cardiac actions, dull or sharp pain near the nipple, shortness of breath. respirations are increased to 40 or 50, or even more per minute. Cough at first short ringing and harsh, soon followed by frothy mucus, soon changing or becoming semi-transparent, viscid and tenacious, usually changing to a rusty sputum on the second day, gradually becoming more copious and of a yellow color. As the disease advances, headache is usually present with more or less delirium, epistaxis, flushed countenance and in all cases that I have treated a flushed or well-defined mahogany blush was over the malar bones. Gastric disturbances highly colored urine and usually scanty. From the onset of the disease prostration is of the most serious character, the above symptoms usually continue for about six to eleven days when a crisis occurs, and within twenty-four hours convalescence is established and as a rule recovery rapidly follows.

Treatment: In most, or I might say, in all forms of pneumonia, the treatment is of the simplest form, in a number of cases but little is indicated. In all forms of pneumonia the general surroundings should be carefully studied. First, is proper ventilation of the sick chamber; this demands the supervision of the physician, as I believe in free ventilation. In very cold weather the nurse or attendant should be guided by his or her sensations in executing the orders of ventilation. The patient is protected against cold by excessive temperature. I do not believe in placing a patient under a window or in a heavy draught, but from the onset of the attack I want my patient to have free admission of oxygen inhalations, especially in the later stages of the disease because it enables us to add to his resources for resisting toxemia.

Food is to be looked after in treating your patient, successfully in as much as the patient is usually attacked in the midst of health and the duration of the disease is short, a modest diet should be adopted. Clinical experience teaches that in many forms of severe types of pneumonia there occurs intestinal distention which so embarrasses the patient that sleep is impossible and often hastens a fatal issue by interfering with respiration and disturbing the heart. it is also important to so arrange the diet that fermentation be prevented. I usually prescribe hot broths, or cold milk may be administered in small quantities during

the entire period of the disease. During convalescence and after the crisis the diet may at once be liberally administered. The fear of not sustaining the patient's vitality has often caused the attending physician to administer concentrated foods which have served to handicap your victim in the struggle. When your patient is sleeping normally you should not have him or her as the case may be disturbed or interrupted for any purpose. I make it a rule in all forms of this disease to administer cold water for drinking purposes. I try to impress upon the patient and family the importance of cold drinks. I often and frequently administer some placebo to be given in ice water where the patient is not so inclined to take water as often as I think necessary for their welfare. I find the action of ice water upon the gastric nerves and vessels is the same as its action upon the skin; it refreshes it by the local shock and consequent reaction. It increases diaphoresis and diuresis by free administration of ice water. It has often been observed that the quantity of urine will almost double, the administration of ice water is for more effective as a diuretic, and again large quantities of hot water are an important factor not generally recognized.

Stimulants: A number of writers claim the application of stimulants is rarely necessary, except in persons who are accustomed to its frequent use and to whom it is necessary as a food. I wish to state here that in my practice I always prescribe stimulants of an alcoholic nature every two to four hours, often in connection with some form of ammonia. It is claimed by some few that the prognosis in the majority of patients is fatal because their peripheral vessels have been enfeebled by dilatation produced by alcohol and their nervous systems deprived of capacity to respond to cold applications, so far I have never experienced any fatalities from the moderate administration of alcohol in pneumonia.

My treatment as a whole, is as I have before stated, first, after confirming my diagnosis and arranging my patient comfortably as the surroundings will admit, I then prescribe eight to ten grains of calomel to be administered one grain every hour until all have been administered, this amount usually produces several copious stool and all fermenting materials being thus removed from the intestinal canal. The distention which so often delays recovery in the advanced cases of pneumococcus toxemia is prevented. I next examine the heart for abnormal conditions in case I find such, and feeble in character, strychnine sulphate is prescribed in doses ranging from 1-60 to 1-30 grain, four to six hours apart. Small doses of coal tar preparations are often used as calmative agents when the restlessness is due to high temperature. As a rule

antipyretics for temperature reduction is damaging to the heart and excretory organs, but I find the infrequent administration of one dose occasionally to allay the restlessness due to high temperature and is of great value to your patient. In case of severe pain in the region of the pleura or lung in adult patients, I prescribe or administer hypodermically a full dose of morphine, 1-4; atropine sulphate, 1-150, this usually puts your patient at rest, relieves the congestion to a great extent and as a rule the pain permanently subsides. I have often prescribed large doses of Dover's powder at night, up to this present writing I do not remember of deriving much benefit from the administration as they lock up the secretions, often produce nausea and suppress urine. I have had excellent results in the first stages of pneumonia and congestion of the viscera by the administration of veratrum viride in doses of 0.60 to 1 c.m. or 10 to 15 drops of the tincture given every two hours until there is a reduction in the pulse rate and temperature, veratrum will produce the best results; I have found its administration useless after fibrinous deposits has taken place. However, I feel it necessary to emphasize the evil effects of cardiac sedatives during the stages of exudation and of coagulation of the exudate. The administration of veratrum viride, digitalis and aconite can only add to the burden of the heart already laboring in consequence of the stasis on the venous side and lack of blood on the arterial side. Paralysis of the heart is the gravest danger because of this state. It is true that a continued high temperature may bring about heart paralysis but this should be corrected by the administration of quinine, and by cold baths, or the cold wet pack. I may add here that I have found quinine sulphate of great value during the stages of pneumonia and after convalescence has been established. Where rattling rales were present, I have derived great benefit by the administration of pulvis ipecac powder. In the later stage of the disease I am accustomed to administer some expectorants, first making sure that the stomach will retain them. I have found that white pine compound, a few grains of ammonia carbonate or ammonium chloride to each dose administered, is a valuable expectorant, as a rule the majority of patients would recover without the administration of expectorants, the family as a rule, or the patient himself, think you are not doing your duty as a successful practitioner and not successfully treating your patient if you do not prescribe some form of expectorant. Let me add that in all stages of the disease I make an effort to keep the mouth clean by frequently washing the mouth with and having the patient gargle Dobell solution, or a saturate solution of chlorate of potash; this should be used every hour or

two during the day. This prevents the accumulation of sordes and prevents the tongue from cracking or becoming dry, leaving a more pleasant taste. I am in a sense partial to counter irritants, I have them used during the stage of congestion, I have found turpentine stupes to be beneficial during the stage of red hepatization, fly blisters are serviceable in promoting absorption. When resolution is perfected and exudation still lingers at the sight of inflammation, to facilitate absorption in chronic pneumonia succeeding an acute attack I find the iodide of ammonium is highly beneficial. I have derived but little benefit from the antiphlogistine jacket or mush poultices, except in the treatment of children. I have derived more from iodine and the cantharides blister than any local application, it relieves congestion, relieves the pain and gets the patient's mind more on the irritation caused by the blister and he sometimes forgets that he has been a victim of pneumonia. There is much more to be mentioned in the management and treatment of pneumonia. The above is the mode of treatment that I generally follow with gratifying results.

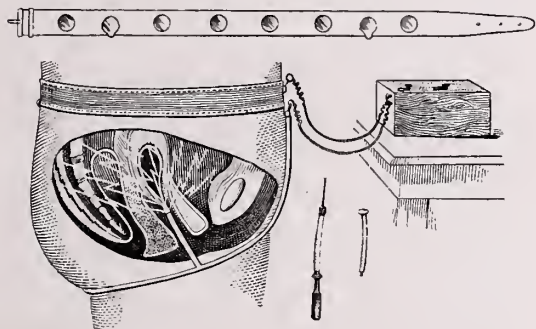
Alcohol.—C. C. Lieb, New York (Journal A. M. A., March 13, 1915), has experimentally studied the reflex effects of alcohol on blood pressure, using cats as subjects, and also has studied and compared the clinical results reported, with observations made in the medical wards of the Roosevelt Hospital. From his experiments and observations, he says, it is evident that small doses of undiluted whiskey cause a reflex effect on the circulation in a certain percentage of the patients, which will probably explain the so-called stimulation which has been ascribed to a direct action of the drug on the circulation. This reflex is most evident in cases with hyperactive superficial and deep reflexes, and least so in those which are apathetic with the bacterial toxemia. It is more marked in moderate drinkers than in those who use alcohol to excess, probably on account of the protective secretion of mucus present in alcoholic gastritis. Irritating concentrations of alcohol are needed for this reflex, and the degree of response varies more or less directly with the degree of irritation produced. From his investigations, it appears that alcohol does not stimulate the circulation, either by increasing the heart beat, or by raising the blood pressure, and he concludes that it is evident from his experiments that even though whiskey may raise for a few moments the systolic blood pressure, and thus act as an apparent circulatory stimulant, it cannot be regarded as such in the true sense, since its decrease of cardiac efficiency raises disproportionately the diastolic pressure, and lowers blood pressure.

ELECTRICITY IN THE TREATMENT OF PELVIC DISEASES.*

By J. A. FREEMAN, Crestwood.

This applies especially to diseases of women but is of great efficiency in man as well. Electricity intelligently applied will allay irritation, calm nervous excitement, remove congestion, relieve pain, restore to their natural vital conditions, tissues and glands that are seemingly exhausted, and bring up to a standard of healthy action organs that are infantile and undeveloped.

Electricity so far as we can see is the life of the nervous system and through it all the organs are stimulated to healthy action and proper nutrition, therefore in order to properly apply, and use this beneficent aid to treatment and cure, I have designed an appliance that I think is the easiest and the most satisfactory instrument to use, it is easy to control and can be left in the hands of the patient with safety. The accompanying cuts show very plainly the manner of application, how the electrodes reach the womb in whatever po-



sition it may be, sending the healing current through all its tissues as well as through the broad ligaments, Fallopian tubes and ovaries, relieving the heaviness and congestion that causes the displacement, giving tone and renewed strength to the weakened ligaments, improving the circulation and nutrition and above all removing pain, giving lightness, buoyancy and comfort, where there was continual depression in body and mind, and functions imperfectly performed. This treatment restores lost or crippled functions bringing them into life and action, as in cases of infantile uterus and poorly developed ovaries, resulting in amenorrhoea and the unsatisfying conditions that go with it. There is no treatment known that will so quickly remedy this trouble. All the fluid secretions of the body are under many circumstances loaded with bacteria, nothing so quickly destroys

them as electric current, by all means it is antiseptic and cleansing in nature

The great electrician Nicola Tesla has discovered electricity to be and recommends it as the fountain of youth, showing that a woman's beauty may not fade if she will destroy the bacteria that swarm on the skin and in the tissues by electric massage, the wrinkles come not, the color, plumpness and beauty remain.

The absence of menstruation is often a serious draw-back to the growing woman for three or four years at the age of puberty, rendering the subject of it morose, melancholy and nervous, she has a poor appetite, bad color, lack of plumpness, feels languid and dull and frequently goes into a decline. In such cases there is no remedy equal to electricity to bring about the desired return to health. The amenorrhoea frequently depends upon an infantile and undeveloped uterus, weak, badly nourished ovaries and an insufficient supply of healthy blood to the pelvic organs, they are pale and blanched almost bloodless, starved for the proper elements of growth and healthy development. In these cases electricity used through and by the belt-electrode and attachments, is the most sensible and quickest means of relief known to the profession.

The Faradic current used at regular intervals in the quiet seclusion of girl's home with no exposure of person, no shocks to her maidenly modesty in the privacy of her own room she can use the time, under the circumstances, the gentle current made stronger as she becomes accustomed to it, will glide through the tissues, quickening the circulation, increasing the nerve force, stimulating the nutrition and healthy growth until in a short time the phantoms of disease and unrest and depression will fade like a dream, menstruation will be established, general body comfort will be enjoyed and the rich red glow of health will rally to the cheeks.

Dysmenorrhoea, or painful menstruation, the monthly dread of many beautiful women, and there are thousands of them up and down this broad land, suffering dreadfully every twenty eight days, hardly recovering from the shock of one period before another is ushered in, and they get very little relief and very often little sympathy and suffer on for years enduring it all as patiently as they can. They cannot or rather will not go to the physician's office and undergo the only treatment that has heretofore offered them any relief, but now with this appliance they can go into the sacred retreat of their own rooms and cure themselves, drive away the dreadful uterine cramps, the days of backache, headache, hipache, nausea and the altogether wretchedness that they have so long been heir to. To treat this condition of painful menstruation, apply

*Read before the Oldham County Medical Society.

the belt-electrode snugly around the waist, the metals all touching the skin, then apply the perineal band with the ball or cup electrode attached pushing it gently but firmly up against the womb, then buckle it back and front to the "belt" then attach the conducting cords one to the belt and the other to the perineal band, and then to the battery, and turn on the current, starting with the mildest current then by slow degrees move up the regulator, always avoiding sudden starts or jerks, when a pleasant stimulating current is reached let it flow for from ten to twenty minutes, in the meantime the patient should relax every muscle and nerve and remain as quiet as possible during the entire treatment, which should be given every other day during the interval between the periods and continue until relief is complete, the flow being regular and free from pain. If there is much congestion hot water douches followed by glycerine tampons will materially hasten the cure.

Metrorrhagia, or flooding at the periods continuing five, eight or ten days or two weeks, is a miserable condition, but all too common making many a good woman practically an invalid, not only while the flow is on but for the remainder of the short time that elapses before the next period is due. She is pale, bloodless, weak and often emaciated, unfit for her duties, much less the pleasures of life, for these conditions internal medication does little good, often causing a waste of precious time. Either go to the doctor's office and have a curettement done, or promptly begin the use of the electric treatment here advised, that is the use of the positive current applied to the endometrium, the positive current is a hemostatic par-excellence, and in my hands has done wonderful things, in various uterine hemorrhages, especially those that come at the beginning and during the course of the menopause. Often a very gentle curettement followed by iodine and then the positive current persistently applied produce most pleasing results. Of course consistent hygienic rules must be obeyed, diet, bathing, recreation and mental attitude are important elements in any sensible treatment of any disease.

Endometritis is a very prevalent and withal a very serious condition, one that follows repeated colds and checks to the menstrual flow. Frequent miscarriages or the clumsy and dangerous means used to produce them, and other inflammations of the sexual tract, both simple and specific, spreading into and involving the endometrium, the Fallopian tubes and ovaries, bringing the dire necessity for so many serious surgical operations, resulting in the loss of the ovaries and tubes, too frequently the uterus itself, thus leaving woman unsexed,

unhappy and unequal to the requirements made of her ever afterwards, the thing then to do, to do promptly and with a will is to cure the endometritis, stop the insidious spread of disease and destruction through the inner sanctuary of the woman's sexual system, which is naturally as pure as a crystal and fulfills most surprisingly well its wonderful mission, until contamination creeps in and plays havoc with its functions, its mechanism and its work.

The symptoms of endometritis are too frequent returns of the menses, with a flow that is too free and lasts too long, accompanied by blood clots and stringy membranous-looking shreds, and tissue debris, very disagreeable odor, distasteful to the patient and others near her, weakness, heaviness in the pelvis, back-ache and pain in the hips and thighs. Between the periods a disagreeable irritating uterine discharge, flowing from the uterus and poisoning the sexual outlet, which is a heavy drain upon a woman's vitality. Such conditions should be promptly and assiduously treated, they never get well of themselves, tend to grow worse and bring on other troubles. The best treatment is a thorough curettment, medicinal applications and packing, to be followed by a course of electricity, applied by an intra-uterine electrode. In every case sterilize the vagina as fully as possible by using a gallon or two of normal salt solution, this to be followed by half a gallon of hot water with your favorite antiseptic added, after this vaginal toilette, sterilize the intra-uterine electrode, introduce it the full length of the uterus and set the current going, increasing it to any strength required, and continue from five to twenty-five minutes. Where there is much congestion follow each treatment with a glycerine tampon pushed up to the uterus which can be easily done by using a capsule. This treatment is given every third day between the periods, constipation prevented, a generous diet allowed, and complete rest taken during the menstrual flow, with an occasional douche of hot sterile water. If the case is of long standing tonics will be strong helpers against disease and complete invalidism. In the various displacements of the uterus such as prolapsus, retroversion, anteversion, falling against and pressing upon the bladder, there is nothing that will give such prompt relief as the belt electrode, used every day by the patient herself from twenty to thirty minutes, using a mild current all the time. Even if she drops to sleep under its soothing and kindly influence it will do no harm, then there is the nameless ache in the uterus and back and ovary, weakness and an ever-present uneasiness, and here again the Faradic current drives on the retarded circulation, unloads the congested vessels, im-

proves the nutrition, waste products are carried out, new building tissue brought in, thus the cure is brought about. From a languid, listless, spiritless woman this treatment will bring one who wants to romp, to sing and laugh and to play, for she is free from pelvic weight, from pain, from a nameless dread, and it is well that she should rejoice in her new well-being and creature of comfort, to say nothing of the heart made lighter and the mind brighter.

Then there comes another trying time in a woman's life, that is the menopause, when many of the sexual functions are awry and take on the "lethal" sleep, menstruation becomes irregular and erratic, there may be an interval of only a few days and then an interim of one or two months, then a flooding spell, then a rest and return and then gone forever. There are cases not so fortunate, the periods become irregular and persistently hang on, far past the period of life when they should have ceased to exist, and instead of the usual atrophy of the uterus and cessation of its functions, there is pain, increased weight in the pelvis, pressure on bladder or rectum, or both, a lack of energy and an indefinable dread. Taken up at once many of these can be cured by the means herein before mentioned, neglected and allowed to run on indefinitely they grow you a handsome fibroid or more malignant condition.

Here you will find prevention much better than cure. However there is no treatment known except removal by the knife so good for a fibroid condition as electricity. It will do much towards driving away or holding them in check to such an extent that they do but little harm, and cease to grow and menace the life and comfort of the patient. It reduces hemorrhage to a minimum often reduces the size of growth, removes the pain thus giving much comfort that otherwise could not be had. Therefore any one approaching this climax in life, on the appearance of ugly symptoms should guard herself with the strong arm of electric force that accomplishes so many wonderful things in its silent way. I have had a good deal of experience in all of the conditions mentioned and it acts like magic. Many patients really enjoy its use, the menses come and go, sometimes irregularly but without pain and without flooding, without interstitial growth or the formation of tumors. They just glide through the change, feeling none the worse of wear.

There is one more use to put this treatment to, and that is in cases where a sexual tonic is needed, where from undeveloped ovaries an infantile uterus and poor circulation, there is apathy and indifference, the Faradic current will so stimulate the dormant organs and

energies that normal conditions will by and by be attained.

There is but one precaution to be taken here, and that is if pregnancy is known to exist or there is even a suspicion of its existence this treatment should not be used in any of its forms.

SOME PHASES OF TRACHOMA.*

By L. E. DOWNS, Georgetown.

The meaning of the Greek word trachoma is "rough," hence the origin of the term "granular lids."

Trachoma is a disease of the conjunctiva, chronic in nature, prone to remissions, and characterized by an initial conjunctivitis, and followed by infiltration of the conjunctiva with lymphoid elements, which ultimately causes the destruction of the adjacent tissue, leaving behind a deposit of cicatricial tissue, which tends to contraction.

The disease is due to infection through the secretions and its continuance is due to the direct transfer of infectious material from the diseased eye to the otherwise normal eye.

Trachoma is a disease of oriental origin, and references have been found in the writings of the ancient Greeks and Egyptians. Prior to the beginning of the last century reference to the existence of trachoma in Europe are very indefinite. Napoleon's soldiers from Egypt in 1802 have been blamed for its subsequent dissemination in Europe, and in some localities is the cause of 60 per cent of all cases of blindness. The disease is therefore an imported one, and its presence can nearly always be traced to cases which originated from the Orient.

In 1897 the U. S. Public Health Service classed trachoma as "dangerous contagious," and since that date the immigration laws have forbidden the landing of aliens thus affected. On Ellis Island suspicious classes are detained for two and three weeks in order to determine the kind of infection present.

As it is classified, trachoma is not a dangerous contagious disease in the sense that it is dangerous to life, but by reason of its destructive effect on the tissues of the eye with resulting blindness.

Regarding the etiology of trachoma, notwithstanding the volumes of literature that have been written on it, and the patient investigations that have been made, the actual causative factor has not yet been discovered. Neither microscopic studies nor laboratory investigations have as yet revealed any particular microbe that might cause it. It is to be hoped, however, that with improved microscopic technique and a better understanding

*Read before the Scott County Medical Society.

of the methods of staining, the cause of trachoma will soon be discovered.

In the United States trachoma has not become general in its distribution. Owing to the great tide of immigration to this country we find it most prevalent along the Atlantic seaboard, and practically always in persons either of foreign birth or of foreign parentage. Its presence in this country then is due to its importation previous to the year 1897, and it is gratifying to note that, since the enforcement of stringent measures the number of cases does not tend to increase. Other than its presence along the seaboard cities of the Atlantic, and to a limited extent in the West, its prevalence in the interior is practically limited to restricted areas of Illinois, Kentucky and West Virginia.

So far as we know the people from these areas are the only ones of strictly American parentage who suffer from this malady. And the evidence is all in favor of the supposition that it was due to importation, and that by reason of comparative poverty and lack of medical facilities prevailing in these sections, was able to become firmly established therein.

Of the states just mentioned, it is most prevalent in West Virginia and Kentucky. The governmental inspection of the schools in several counties of the former state shows an infection of as high as 17 per cent of those examined in some counties. In Kentucky it is most prevalent in the mountain sections, where as yet satisfactory statistics have not been completed. A recent inspection of 35,000 school children in Jefferson county, Kentucky, revealed over 800 undoubted cases of trachoma, besides some 328 suspicious cases.

In examining suspicious cases for trachoma, the proper method is to evert the upper lid and examine it for granules or whatever condition may be present there at later stages. The simple drawing down of the lower lid cannot be relied upon for an examination.

As regards the diagnosis of trachoma, I doubt that any examiner can correctly differentiate every case from acute follicular conjunctivitis. In fact they are so nearly alike in appearance that some ophthalmologists have suspected it to be one and the same disease, but running a course different in severity and duration. The latest and most scientific literature on its diagnosis is vague, and cannot be applied in all cases. In certain localities the disease differs slightly in its clinical type from that of other localities. And since the microscope is of practically no value to us in differentiating it, the examiner is compelled to base his judgment solely upon the clinical symptoms, with the aid of his experience in former and similar cases. He observes that in acute conjunctivitis there is the same swollen, velvety condition of the con-

junctiva as in the early stage of trachoma. Also there is in both instances photophobia, lachrymation, increased secretion and hypertrophied follicles.

However much the two diseases may approximate each other in a clinical way, fortunately the parting of the ways is reached in the course of a few days when we are enabled to view the situation with absolute certainty. Follicular conjunctivitis, when properly handled, will run its course in a period of two or three weeks.

It will leave the conjunctiva smooth and unaffected after recovery. It does not leave scar tissue, corneal ulcers nor impaired vision as a sequelae. On the other hand, trachoma is recognized with absolute certainty at this stage. Passing the acute form, at which time it so resembles follicular conjunctivitis, the velvety congestion soon subsides, leaving exposed a flourishing crop of granules, varying in size and color, and from the apices of the most virile of which is emitted the pus secretions so often flowing from the badly affected eye. These granules are imbedded just beneath the surface, and are covered over with a thin layer of the conjunctiva, through which they seem to protrude.

With the subsidence of the swollen and velvety lining of the lid, the disease merges into the second stage, or the connective tissue stage. If the condition is not checked here it now resolves itself into the subacute or chronic state. The entire upper lid is thickened and sluggish, and the cornea may be marked by a haziness, obstructing the vision. At this stage it must also be borne in mind that different cases vary widely in their clinical aspects. While one case may be free from corneal involvement another will be marked by pannus formation and deep corneal ulcers.

In the third and last stage there is also a variety of symptoms. This is the stage of connective tissue formation, and contraction continues until there is complete destruction of the subconjunctival lymphoid tissue. This change may take years to produce.

Under the head of complications and sequelae of trachoma, we often observe cases of mixed infection, and the onset of the condition so severe as to materially affect the vision from the beginning. As a result of violent and acute infection, early and profound ulcerations of the cornea may ensue, with infiltration and perforation of the same, and finally evacuation of the eyeball. In almost all untreated cases there is at some stage involvement of the cornea of one form or another. The formation of pannus is frequent, which means the overgrowth of the cornea with a thick and fleshy mass of newly formed vessels and tissues, so dense at times as to produce almost complete blindness.

Another method by which haziness is produced is by the contact of the ulcers and granules of the upper lid with the cornea, which is equally as destructive to the sight.

Still another phase vastly important both as to the vision as well as the lid itself, is the matter of cicatricial contraction of the lining of the upper lid. As the old ulcers repair, the scar tissue formation under the lid may cause the margin of the lid to turn inward. With this complication of entropion the eyelashes irritate the eyeball to the extent of ulcer formation and otherwise great annoyance to the individual. In other instances the cicatricial deposits in the lining of the lid cause it to turn its inner surface outward, or ectropion. In such a case the eye is frequently the receptacle of foreign bodies, and owing to the eversion of the lid the tears cannot reach the tear duct, their only outlet being their overflow across the face.

Without laying too much stress upon the more fatal cases of trachoma, it is astonishing to what extent the vision may be impaired by a corneal haziness so slight that it is scarcely perceptible to the average examiner. It is not uncommon for such unfortunate individuals to show only one tenth the normal vision.

The treatment of trachoma varies almost in proportion to the wide variation and complications of the disease. In severe and well advanced cases nothing short of operative treatment is indicated. With the aid of the roller forceps the granules may be successfully expressed. In case the granules are pronounced enough, a very good method is to puncture each granule with a small knife. When located in obscure regions of the lid, they may be scraped with the sharp blade of a knife. In other instances I have had good results from brushing the lids with a tooth brush after having cut the bristles short and smooth. With anything other than the forceps, however, it is difficult to reach those granules located far back under the tarsal fold. Following such procedure it is well to apply a weak solution of trichloroacetic acid, nitrate of silver or mercurial ointment. Cases complicating corneal involvement should be influenced by a mydriatic, and so far as possible be protected from the light.

The use of simple eyewashes serves as a splendid adjunct to the treatment by keeping the secretions washed away and by adding to the patient's comfort. However, too much dependence in such treatment alone is not safe, lest the patient by believing his condition to be no worse, allows it to drift on into the chronic stage. Hoping eventually to affect a cure by these methods many a person comes to the sad realization later that he has "sinned away his day of grace," and that

now there is no cure for him. To accomplish the most, then, prompt, frequent, and persistent treatment is urged.

Such then is the general course of a disease prone to wreak such unmerited vengeance upon its innocent victims. It must not be inferred that the progress of the disease is in all cases uniform. It is peculiarly treacherous and hazardous to the patient because of its remissions and exacerbations in many cases. Many patients grow weary of the slow progress of recovery and take it upon themselves to dispense with the treatment too early, only to find that later it has returned in a more violent and destructive form than ever.

Statistics show that about 75 per cent. of untreated cases result in blindness sooner or later, and it is because of this deplorable fact that war is being waged upon the dreaded disease. If it appears in the child he is debarred by municipal regulations from the public schools at an age when the mind is most receptive. When it occurs in early manhood, the door of professional study is practically closed. When defective vision or blindness result he is prevented from laying up in the storehouse of his mind those mental pictures derived from the study of art, science and literature among which his imagination could run riot to the solace of his declining years. Indeed his lot is most pitiful.

An eminent ophthalmologist has stated he would prefer that his child would have smallpox rather than trachoma. In the one case he either dies or recovers, in the other his life is inevitably made miserable.

Bringing the matter closer to us in whose hands rests the responsibility of the health and well being of Scott county in a professional way, this malady is present among us probably in a more prolific form than the casual observer would scarcely believe. It has come under the writer's personal observation from practically every section of the county. It being a disease contagious in all its stages, the innocent in many homes are continually being subjected to its contagion through the careless use of the towel, the wash basin, bed clothing and many other ways by which the secretions may be carried from one eye to another. In the schools an undetected case of trachoma may infect an innocent little deskmate.

Just at this season of the year the epidemic seems to be unusually active among us, and several cases quite recently have come under my observation severely affected. I do not wish to appear as an alarmist, but as one having recognized impending danger. Trachoma is a preventable disease. Its spread could be and should be largely controlled. The public

has a right to the knowledge of the habits of the disease and how to protect themselves.

For the purpose of relieving the situation, Governmental inspection has been invited and obtained in other sections of the state around us, and public sentiment therefore is doing much to prevent its spread and to release the innocent from its dangers. People in other sections of the State of Kentucky are being enlightened along this line and are taking steps to prevent its spread. Also, the laity has joined with the profession in these sections to make the effort more effective. It is easier to prevent trachoma than to cure it. And in no other condition is the old adage more applicable than here, that, an ounce of prevention is worth a pound of cure. Many cases are entirely incurable, and if it is within our domain to prevent it, governmental inspection might not be out of place in our own county.

RENAL TUMOR: REPORT OF CASE.*

By J. T. REDDICK, Paducah.

I was called to see Mrs. Lula D., age 27, on June 6th, 1914, for what seemed to be a nervous, hysterical condition, her mother having been buried that day, having died of tuberculosis, at about fifty-two years of age.

In the course of the examination I detected an abdominal tumor, (my attention not having been called to it) which I diagnosed as an ovarian cyst, it being in right ovarian region.

She called at my office about two weeks ago for further consultation and advice as the tumor had much increased in size and was giving considerable pain.

She is now twenty-eight years old, has two children, aged five and two, is a small, anemic woman; her father died at about the age of forty, of some trouble the result of measles and her mother as before stated, last June, of pulmonary tuberculosis, aged fifty-two. She first noticed this enlargement in abdomen about five years ago, and said it was in right ovarian region. It had every appearance of being an ovarian cyst. I advised an operation at once. She entered hospital February 14th, and I operated February 16th.

Drs. Blythe and Kirkpatrick were in operating room as she went under the anaesthetic and both expressed themselves as believing it to be an ovarian cyst, from inspection.

On opening the abdomen, to my surprise, it had no connection with pelvic organs, but found it to be a tumor connected with the right kidney. The omentum and intestines were firmly adherent to anterior, inferior surface of the tumor, and the kidney, healthy in

appearance, but much reduced in size, perhaps from pressure atrophy, firmly adherent to tumor. The tumor was enveloped in a thick fibrous capsule, almost as thick and hard as sole leather, and seemed to have originated from the hilum of the kidney. With considerable difficulty it was enucleated, and there was quite a good deal of hemorrhage from the hilum of the kidney which I could not control until I sutured the capsule, making good pressure over the denuded kidney tissue. The thick, fibrous covering which was stripped off, was removed, drainage put in, and the patient at this time, nine days after the operation, is doing well.

Renal tumors are relatively rare. The new growths of the kidney are best divided into three classes—granulomatous, parasitic neoplastic. The first includes isolated tubercles, gumma, and actinocytic foci. As regards the relative occurrence of tumors of the kidney Kelynaek, in an analysis of 306 cases of primary renal growths, found 115 sarcomata, 22 myosarcomata, 145 carcinomata, 15 fibromata, or lipomata and 12 adenomata. In this series the author failed to consider the hypernephroma, which probably formed a considerable proportion of the tumors listed as sarcoma or carcinoma.

The true neoplasms of the kidney are most conveniently classed as innocent and malignant. The benign tumors of the kidneys are of relatively little importance* and there is surprisingly little general or local disturbance following their development in the renal tissue. Named in their relative order of occurrence, the chief innocent tumors of the kidney, are fibroma, lipoma, myomata and angioma.

Fibromata occur most commonly in the cortical portion of the organ, less frequently in the capsule. They are usually round, and appear in small, rarely large masses of connective tissue fibrils arranged usually in whirl-like bodies.

Lipomata are growths from the capsule in practically all instances. They may be of considerable size, and though well differentiated from the renal tissue, they may cause considerable pressure or erosion of the renal tissue.

Myomata are of two classes—leiomyoma and rhabdomyoma. The former growth is commonly found in the capsule and is of small size. Rhabdomyomata, or striped muscle tissue are most frequently found in infants, and they are associated in most cases with sarcomatous or teratomatous neoplasms. They are often of large size, and infiltrate the renal tissue diffusely so as to make enucleation impossible without total nephrectomy. They are usually more or less malignant, and

*Read before the McCracken County Medical Society.

in most of such cases they grow rapidly and set up fairly early metastases.

Hypernephromata are said to be the most frequent primary growths that occur in the kidney. They are said to spring from bits of fetal tissue originally intended to develop into adrenal bodies, but which become detached and incorporated in the anlage for the kidney." Green and Brooks, *Diseases of the Genito Urinary Organs and the Kidneys*. Third Edition, 1912.

The tumor which I exhibit, from its appearance, does not belong to any of the above mentioned classes, neither is it sarcomatous or carcinomatous. It measures now 15 inches in circumference and I am sure it was six inches in diameter before removal.

It is no doubt a simple cyst of the kidney. I have a special work by Green and Brooks on *Diseases of the Genito Urinary Organs and the Kidney*, and Bryant & Buck's *American System of Surgery*, besides several other works on surgery and I cannot find a description of a case to fit this. In an article by Clarence Arthur McWilliams in *Reference Handbook of Medical Sciences* I find this quotation:

"Simple or serous cysts are not very frequent, Brachel having collected twenty-one cases out of the whole literature from the year 1865 to 1899. They are usually solitary and may grow to large size. They cause no symptoms except those due to pressure. They arise from the cortex and project from its surface, the remainder of the kidney being healthy and functioning actively. Their contents are various, thin, clear, blood or colloid. Women seem to be more affected than men, in the proportion of about four men to six women. Their exact mode of origin is uncertain. The diagnosis is very difficult, as they may be mistaken for a number of other kidney conditions. Treatment consists in tapping them when they become so large as to cause discomfort. If they refill they may be laid open and the edges of the cyst stitched to those of the wound. This course, however, involves a greater loss of time before healing is completed than if the plan is adopted of totally removing the cyst and its wall, the cavity of which may then be obliterated by sutures."

Exercise and Competition—Physical exercise, if it is to be of real hygienic service, has an object quite different from the preparation of a specially equipped individual trained for a game. Exercise is intended to benefit all the muscles and all the pupils. Its aim is to advance the bodily equipment of the great number of our youth; otherwise our so-called physical education fails to serve the community at large

CROUPOUS PNEUMONIA.*

By J. E. WILSON, Butler

Pneumonia is an inflammation of the lungs, pneumonitis, lobar pneumonia, or lung fever.

It is an acute infectious disease, characterized by an inflammation of one or more lobes of the lung, the affected parts becoming consolidated, owing to the exudation of cells and fibrin into the air vesicles. The exciting cause is usually the *diplococcus pneumoniae* of Frankel, but other microorganisms may produce it. The disease sets in with a chill which is followed by a rapid rise in temperature, hurried respiration, cough, and expectoration of peculiar rust-colored sputum. The fever remains high until about the ninth day when it falls by crisis. The disease generally involves the lower lobe of the right lung, and is accompanied by a fibrinous pleurisy. In the early stage the lung is intensely congested, soon there is an exudation into the vesicles causing solidification of the lobe. The lung in the beginning of this stage is dark red and resembles liver tissue; later it becomes gray. In favorable cases the exudate becomes absorbed and expectorated.

The characteristics of pneumonia are the sudden onset with a chill, pain in the side, cough, delirium, high and regular fever, full and bounding pulse with increased rate; and respiration becoming very rapid, 60 to 80 in a child, with expiratory grunt, and the alae of the nose dilating with each inspiration. The face is flushed and there is often a circumscribed redness on the cheek of the affected side. The tongue is furred, and there may be nausea and vomiting. The bowels are usually constipated, and tympanites is often present. The urine is scanty and high-colored. The picture is completed by the physical signs, the rust-colored sputum, with the *diplococcus*. Inspection reveals increased motion in the affected side. Palpation discloses increased vocal fremitus over the affected part. In percussing, ordinarily there is marked dullness over the affected area. Auscultation in the early stage shows the breath sounds to be often weak. As engorgement advances into consolidation, the breath-sounds become broncho-vesicular and, finally, bronchial. During the second stage friction sounds are often heard. During the third or stage of resolution, small moist crepitant, and later mixed moist rales of all kinds may be present. The patient often lies on the affected side. The fever may be very slight, or absent in old persons. In children the fever may abate gradually. A rise just before or just after the true crisis may occur. Delayed resolution may cause some fever of an irregu-

*Read before the Pendleton County Medical Society.

lar type for weeks. Cough may be absent, especially in children. Expectoration varies much in character and quantity. Pain is slight or absent, if the pleura is not involved, as in the deeper lung-tissues. In children abdominal pain is an early symptom. Tympanites is common and may lead to a mistaken diagnosis. The pulse in severe cases may be dicrotic, or small and rapid, and followed by serious heart weakness. Because of the obstruction of the pulmonary circulation the right heart may have an excessive amount of work thrown upon it. And the character of the pulse is no indication of the manner in which the right ventricle is standing the strain. A closer guide is the pulmonary second sound. If this is accentuated the lesser circulation is being maintained. A disappearance or a weakening of this sound is an indication of right-heart weakness and dilatation.

In children convulsions are a frequent and early accompaniment. The clinical varieties we meet depend in part upon the location, and extent of the pulmonary lesion, but mainly upon the difference in the virulence of the affection, and the resisting powers of the individual.

In the aged and debilitated we often have a type of low adynamic so-called typhoid pneumonia. There are symptoms of more or less profound blood-poison indicating the involvement of the nervous mechanism which presides over the most important functions of the body. Physical signs may be slight. There is delirium, or stupor, early and severe prostration, cyanosis, and some jaundice. The tongue is dry and brown, and the pulse and respiration rapid. This form of disease may be a mixed infection. (A pneumococcus plus a streptococcus.)

The successful treatment of pneumonia does not depend upon the number of drugs you leave in the room; but, rather on environments and intelligent application of the nurse. The patient must be warm and comfortable. The air to breathe must be cool and pure. There must be moderate light and no noise. The temperature of the room must be regular. The nourishment must be fairly rich, and easily digested. The patient must have a daily warm sponge bath. The face may often have a cool sponging. Very high temperature in young and sthenic cases may be controlled by cold bath, semi-solid and liquid foods may be given, especially plenty of water. The digestive tract must have attention. Pain may sometimes be controlled by strapping. Nerve sedatives may be needed. Antipyretics may be used in sthenic cases in the first stage. Later the circulation is best equalized by warm baths and other external applications. If breathing becomes very difficult stimulants are indicated, especially

about the time of the crisis. Heart tonics used with care may do good. Convalescence calls for rest, air food and digestants and iron tonics.

CATARRHAL PNEUMONIA.*

By S. M. HOPKINS, Demossville.

An inflammation of the minute bronchi and air vesicles is known by the terms: broncho pneumonia, capillary bronchitis and catarrhal pneumonia. Age is a predisposing factor, as this is the form of pneumonia usually seen in young children. Also often seen in the aged. Also the secondary pneumonias of older children and adults are of this type. The primary type is much more prevalent in winter and spring months. The same may be said of the secondary type, as pneumonia is oftener seen to follow epidemics of measles, pertussis and other infectious diseases of children in winter than in summer. This form of pneumonia is often of a tubercular origin. In the primary cases the pneumococcus is nearly always present, and in a large proportion it is found alone or associated with streptococcus. Pneumonia following influenza may be caused by the specific organism of influenza. The secondary cases are due to a mixed infection. The pneumococcus is usually present and is associated with one or more of the following, viz: streptococcus, staphylococcus, Klebs-Loeffler bacillus, typhoid bacillus or the specific bacillus of the disease to which the pneumonia is secondary.

Catarrhal pneumonia is seen in many different forms. There is no typical form. About one third of the cases are of the primary variety. They present usually the symptoms of acute bronchitis of severe grade. The temperature is 102-105, pulse is usually fast and full. The respirations are hurried. If the patient is not old enough to complain of pain it will be evident that pain is present. In some cases the cerebral symptoms are most prominent, convulsions, restlessness and delirium may mark the pulmonary symptoms for a few days, making a diagnosis impossible or at least doubtful. In what is termed the congestive form the symptoms are more severe, the course is irregular, cough may be absent, temperature high, breathing very rapid, nervous symptoms very prominent. This class of cases may prove rapidly fatal or run a pretty severe course.

Other cases will begin very much as a typical lobar pneumonia from which they are sometimes pretty hard to diagnose.

The secondary pneumonias are more common, the symptoms are marked by the primary disease, and the disease is often entirely

*Read before the Pendleton County Medical Society.

overlooked. An increase in fever, cough, respirations, etc., occurring during the course of most any of the acute infectious diseases, especially measles and whooping cough, should lead us to suspect pneumonia.

In the beginning of an attack the physical signs are usually those of a general bronchitis. We will notice sub-crepitant and sibilant rales, soon larger or smaller areas of consolidation are present. At first rapid breathing, then cyanosis is observed. Palpation shows defective expansion over the consolidated areas. Small areas of dullness is present or the dullness is greater if several small areas have coalesced.

The diagnosis from acute general bronchitis is often difficult and sometimes impossible in first few days. In pneumonia the fever, cough, cyanosis and prostration continue and in a few days we should get the characteristic physical signs of localized consolidations. A primary lobar pneumonia with small area of consolidation in a child under two years of age, might put the diagnosis in doubt, but we usually would not have to wait long, as a lobar pneumonia in a child of this age usually runs a very short, favorable course.

A diagnosis from the tuberculous form of broncho-pneumonia is only made positive by microscopical test of sputum and a tuberculin test. The prognosis is grave except in the very mild cases.

Much may be done in a prophylactic way and any abnormality of nose and throat should receive appropriate treatment. Every child with acute bronchitis, measles, pertussis and other infectious diseases should be protected from exposure to cold. In primary cases there seems to be little danger of contagion, but cases secondary to measles and other of the infectious diseases are contagious. In one of my families of four children with measles, three of them had pneumonia with one case fatal.

The secondary cases, especially, should be isolated. The sick room should be large and well ventilated, kept at a temperature of 68 to 70 degrees F.

It is customary to use oil silk or flax seed meal poultice on chest. A light flax-seed meal with a little mustard seed makes good application. A calomel purge in the beginning is in order. High temperature calls for frequent tepid baths in young children, cold sponging is proper in older children or adults if the tepid baths fail, nervousness may be quieted in the beginning with a small dose of phenacetin, but would not give it except early. A fever mixture of citrate potassium and spirits mildererus may be employed, Dover's powder in small doses is best form of opiate for troublesome cough, but should be used very sparingly in small children. The

diet should be light, milk, eggs, albumen, broths, etc.

Muriate of ammonia is best expectorant, when an expectorant is indicated, but is so likely to disagree with stomach that it is often better to use the carbonate or aromatic spirits.

The cardiac stimulants, alcohol, strychnia, etc., should be used when indicated, should the serums be used a bacteriological examination of sputum would be necessary to the proper use of them.

GRIP.*

By H. W. WATT, Pembroke.

When our Honorable Secretary at our last meeting asked me to prepare you a paper for to-day's meeting, I began at once, like the proverbial fish, to flounder in an attempt to select a subject that would be both entertaining and instructive. However recognizing my limitations and knowing myself to be one among the least of you I soon came to the conclusion that it was beyond me to either instruct or entertain you, therefore I have chosen for your consideration the commonplace subject of Grip.

Grip is an epidemic disease, marked by depression, fever, catarrhal inflammations and neuralgic and muscular pains. It is a very old disease possibly having been described by Hippocrates in the year 412 B. C. It has been no respecter of place or person, frequently occurring in pandemic form the world over. Our earliest authentic history of the disease is from Russian, hence one of its names Russian fever. It is a direct import from that country and if I may be permitted to add not a very desirable one.

The first great outbreak of the disease in the United States in the winters of 1889 and 1890 and since that time it has been constantly among us, and like the poor, it seems that we are to have it amongst us for always.

The cause of grip was a mooted question for years. Pfeiffer in 1893 discovered in the expectorations a minute bacillus which has been accepted as its true cause. But by way of parenthesis if you will allow me will say that I am still a little pessimistic as to its cause. To explain partially and briefly, only recently I have been through a mild epidemic which had its beginning on the west bank of a water course, traveled west for about two miles and in twenty-four hours I was as busy as a doctor needs to be, the disease attacking from one to half a dozen in each family. In one family the man of the house was the first to develop it, he had not been from home for three weeks, having been kept there on ac-

*Read before the Christian County Medical Society.

count of the illness of a son who had typhoid fever. The remaining members of his family consisting of seven, rapidly developed it, the only one to escape being the son who had typhoid. I also noticed that Ziemssen, quoting Anglada, 1812, says that after a severe thunder storm a whole French Army Corps suddenly developed an acute inflammatory condition of the air passages. Hence, gentlemen just one of my reasons for being a little skeptical regarding the germ theory and leaning somewhat to the old idea of miasmatic infection.

The forms of grip of which there are three need only be mentioned. The catarrhal, which involves the respiratory tract or parts thereof, and I take it the most common; the gastro-intestinal, wherein we have nausea, vomiting and diarrhea, later assuming almost a true colitis, have recently seen three such cases; and the muscular, wherein there is pronounced muscular soreness, the patient telling you that he feels like someone had beaten him with a club. However, there may be in a single patient all of the aforesaid forms.

Symptoms and diagnosis need only a passing mention as you are one and all perfectly familiar with them. The onset is usually sudden, chilly sensations, sometimes a distinct rigor, temperature from 100 to 103 degrees F., increased pulse rate, cough, muscular pain, headache, loss of appetite and more often than not a marked nervous depression out of all proportion to the symptoms.

Complications, of which there are several, play an important role—a few of which I will mention. In the catarrhal form pneumonia is not infrequent, cardiac neuroses and meningitis are also encountered, of the latter will say that twice in the last few years I have made a diagnosis of grip to have my patient die of meningitis in a few days.

As to the sequels, will mention only two, first, the various unstable condition of the nervous system; second, and to my mind by far the chief factor in the consideration of grip, is tuberculosis. Gentlemen, I feel that there is no disease to which flesh is heir that so perfectly invites pulmonary tuberculosis as does grip: the mucous membranes are irritated and the resistive powers of the patient are below par, therefore we have a field both prepared and fertilized for the growth and multiplication of the most dreaded little germ known to medicine. Each of you know that when the enemy has mounted upon every point of vantage his 42 centimeter guns, as he has done when a grip patient develops an active tuberculosis, the doctor with the whole of his rapid-fire armamentarium puts up a puny defense in the extreme, and from my experience, which I dare say is the same with many of you, must fight a losing game and in

the end submit to the Grim Reaper. Within the last year I was called to see a case of grip in a strong young man seventeen years of age who had never been sick before and was not in bed at the time of my visit, who was dead in 80 days of pulmonary tuberculosis. A friend of mine who, to some extent is specializing in tuberculosis, tells me that he considers 80 per cent of all cases of pulmonary tuberculosis, exclusive of those due to direct contagion, have their beginning in grip. A statement gentlemen, worthy of our careful consideration.

Treatment: First, and I think it of prime importance and the duty of every physician, is to convince his grip patient, on the very first visit, that he is sick and needs the careful consideration of a doctor. How often have we all been called to see an intelligent man of our community, find him in bed anxiously awaiting our coming, and on arrival he tells us that he is very ill, has a cough, pain in the chest, chilly sensations, possibly a chill, fever and fast pulse, and adds that he is very sure he has pneumonia. We smile at him, try to assure him, look him over and tell him he has no pneumonia, but instead a case of grip. Instantly you have lifted the millstone from around his neck and unless the doctor is a past master at taking his exit, patient may resent his coming, at least he thinks how extravagant it was to have had a doctor see him when he had just an exaggerated "cold."

And doubtless the morrow will find patient at his usual business. On the other hand had you pronounced his trouble pneumonia a twenty mule team would have been necessary to have gotten him out of bed for ten days or two weeks. Gentlemen, convince your grip patient that they are sick, that they need a doctor and if necessary tell them just what road they are on and at what station they may alight.

As to medicines, and from which I have gotten best results, I usually order an effective dose of castor oil or ealomal if I think it indicated, and beginning at once a prescription containing quinin, asperin and codein, which I continue through the fever cough and pain period. To the above mixture may be added caffeine or strychnin if there be much depression. As a tonic I prefer iron, quinin and strychnin in some of its forms. I am sorry not to have used influenza vaccines, nor have I used the F. E. Ergot treatment. I arrange for good ventilation and order all of the good wholesome food that the patient can assimilate. I direct that patient remain in bed so long as there is fever, and should remain in the house until all symptoms of the disease have disappeared, advising him to prevent sudden heating or chilling of the body, and that one attack does not preclude another.

To Summarize: Let's recognize in influenza a formidable foe, an enemy worthy of our steel. Let's lessen the death rate from tuberculosis by better care of our grip patients. Conservation and reconstruction are to my mind the summary to treatment. Keep all the vitality we can and make as much as we can in the shortest possible time, so that the invitation to Mr. T. B. may be canceled at the earliest possible moment.

RUPTURED BLADDER.*

By P. K. McKenna, Mt. Sterling.

Was called to see Mrs. C., age 38, January 4, 1915, with Drs. Johnson and Cox.

History: She was taken ill December 18, 1914, called Dr. Johnson. Diagnosis, lagrippe. Lasted some seven or eight days, temperature running to 103 in the evening. After this condition subsided patient developed typhoid fever; all symptoms of typhoid present; temperature high; she was in her second or beginning her third week when I was called to see her. On Saturday evening, the 2nd of January, she refused to use bed pan. The nurse decided to let her up to the stool. The patient was delirious and as she was being assisted to the chamber she pulled away from the nurse, sitting down upon the bed real hard. The next morning some enlargement was noticed in the region of the appendix. Dr. Cox was called in consultation; the mass was still on right side, some larger and patient's temperature was 103, pulse 130, respiration 20. I saw the patient January 4, thirty-six hours after the fall. She was very nervous and bromides were given. Nurse gave history of bladder emptying itself. On examination I found distended abdomen, that appeared to be liquid. Advised operation, which we did under local anesthesia in median line, and found cavity full of urine and the bladder ruptured at fundus, about two inches long. We repaired same and patient developed hyperstatic pneumonia and died January 9th, at midnight with temperature 105 2-5 degrees, pulse could not count, respiration 36 to 40

W. A. Clark reports 17 cases of arthritis deformans which were positive to tests for streptococcus viridans antigen, thus proving their infectious nature. These cases constituted 39 per cent of the total number tested. A group of twenty-six control cases, not arthritis, were consistently negative to complement-fixation tests for streptococcus viridans. Thirty-five strains of streptococcus viridans obtained from tonsils, teeth, prostate and blood were used as antigens.

*Read before the Montgomery County Medical Society.

METABOLIC DISTURBANCES OF THE INTESTINAL TRACT WITH ES- SPECIAL REFERENCE TO FOOD INTOXICATION IN IN- FANCY.*

By E. L. Gowdy, Campbellsville.

For some time I have followed the literature on auto-intoxication and protein metabolism with a great deal of interest, and late researches of workers in this field have made it possible to arrive at deductions that are so important both at the bedside and in the office, that I decided to put some of the clinical aspects of these later discoveries in the form of a paper for your consideration. But after getting my notes together I found they would develop into a paper of such voluminous proportions that many phases of the subject would have to be cut out. In trying to preserve the more important ones my paper will appear somewhat disjointed and out of order, but I have tried to confine the discussion to conditions met in everyday practice where a knowledge of the newer physiology of metabolism is essential in order to successfully and properly meet them.

In presenting this subject the essayist has two difficulties to surmount before even brief details of our knowledge of intestinal stasis and intoxication can be set forth. The first of these obstacles is the discredit into which the term "auto-intoxication" or "alimentary toxemia" has fallen, and secondly, the stupendous number of theories and facts that have been presented along this line in the last few years makes it impossible in the short space of this paper to cover even the more important ones. While much of our knowledge along this line is the result of laboratory research—and every doctor has long ago learned that laboratory conclusions are not always compatible with clinical experience—it behooves him to keep thoroughly posted on this most causative factor of the vast majority of human ailments he is called upon to treat.

The reckless use of the term "auto-intoxication" has indeed made it unpopular among scientific investigators, Prof. J. G. Adami going so far as to say, "it should be banished from the vocabulary of all self-respecting medical men." It is true that the term as formerly used was made to cover a multitude of diagnostic errors; on the other hand there is no doubt but that many cases are treated for rheumatism, neuralgia, uric acid diathesis, tuberculosis, neurasthenia, and so on when the cause is simply an alimentary intoxication, and inasmuch as those who object to its use

*Read before the Taylor County Medical Society.

have offered no better term to explain the symptoms of that class of poisons that undoubtedly have their origin or take up their abode in the intestinal tract, the term "alimentary intoxication" is here used to differentiate the malaise from the true general auto-intoxication which we have in the later stages of diabetes mellitus, cholemia and uremia, and the discussion shall be confined to the endogenous poisons, or those generated within the intestinal wall or by that class of bacteria that, under ordinary conditions, are supposed normally to inhabit the intestinal tract in contradistinction to those agents of exogenous origin such as the bacillus typhosus, bacillus dysenteriae and the cholera bacillus which shall not come into any detailed consideration in this paper.

The alimentary tract is the host of a great number of so-called normal bacteria, among which is the bacillus coli communis, which makes its appearance a few hours after birth and remains with us till our dying day, long thought to be harmless but in the light of recent investigations has proven itself one of the greatest enemies of man, second only to the tubercle bacillus as a regulator of population. As this bacillus is an example of the others, a review of its action is here given according to experiments conducted by Kendall: The chief foods for cell nutrition are the carbohydrates and proteins, the carbohydrates, which change into sugar, will undergo fermentation; the proteins in the presence of bacteria, or rather in the absence of sugar, will undergo putrefaction, and in this putrefactive process the indols, skatols and other amines are formed that are so deadly to the cell. In other words, so long as there is plenty of sugar the bacteria will draw on this source of food supply and the result of this action will be an acid that might be of benefit to the human economy, but in the absence of sugar the bacteria will work upon the protein with resulting products of putrefaction.

It was along this line that Metchnikoff some time ago startled the world by announcing that life might be greatly prolonged by the judicious use of food-stuffs and the administration of some harmless bacterium like the lactic acid bacillus to supply an acid medium. But Carl von Noorden, of Vienna, disagrees with the aged scientist and points out that the Anglo-Saxon, Germanic and Semitic races that have conquered the world through their intellectual and physical superiority are eaters of the food-stuffs that produce the most poisons. He thinks that these races in their struggle for existence have developed the power to neutralize the poisons that are formed in the intestinal canal during the process of digestion.

While the race, as a whole, may show a

great deal of resistance both to infections and intoxications, when it comes to food-stuffs it is impossible to compare the diet of the nation to the individual. The average American when he is hungry is willing, either knowing or unknowingly, to eat anything from chop-suey in a dirty Chinese restaurant to horse hamburger that is vended by the hundred and one peddlers on city corners between the hours of nine o'clock and daylight. The poor tenant on a poorer farm will make a meal of bacon and bread with grease and milk for a gravy while the epicure is likely to go to the other extreme with a highly protein or carbohydrate diet. At any rate, hundreds of these patients are treated daily by physicians whether their ailment starts from the action of bacteria in the bowel or saprophytes and amines ingested with the food, and there is no question but that persons suffering with malaise, headache and other symptoms of a mild auto-intoxication have more pathologic products in the feces than those whose physical condition is more normal.

These poisonous products are nearly always acids and are generated by the action of bacteria under suitable conditions, or they may result from the maldigestion of carbohydrates, fats and proteins. In the normal assimilation of these products, normal acids are always formed which nature is prepared to take care of either through neutralization or excretion, for example, the elimination of CO_2 through the lungs and uric acid through the kidneys. The protoplasm of the body cells themselves being alkaline as well as the reaction of the blood, it follows that any overproduction of acids in the system or deficient elimination of those normally produced is bound to make some grave changes in the body cells which manifest themselves in numberless symptom-complexes, some of which are so mild as to escape observation while others are severe enough to produce profound coma. Of these acids, oxybutyric, diacetic, acetone and indican are most frequently observed, probably because they produce more alarming symptoms than the milder but nevertheless pathologic acids. Indeed, some of these acids seem to produce no systemic effect at all as in the case of those which produce a urticaria ranging from the so-called hives of infancy to an intense nettle-rash in the adult without exciting anything other than local symptoms.

It might be mentioned here that the disassimilation of food products is not the only factor on acidosis. The overindulgence of tobacco and vomiting following an alcoholic debauch is nothing other than an acid intoxication.

While alarming symptoms accompany an acidosis caused by overindulgence of certain

food elements, by far the most troublesome and chronic conditions are caused by acids that are formed by the action of bacteria. It is not the province of this paper to review the physiological process of intermediary protein metabolism with its formation of amino acids and phenomenon of immunity except in regard to the amines formed by the putrefaction of amino acids in the intestinal tract, for each of these amines has its own physiological action, and consequently a broad application in clinical medicine. It should be remembered, however, that the problem of protein metabolism is one of amino acid supply and as each of the eighteen well-defined amino acids represents the yield of the protein product of some particular class of food-stuffs, it is obvious that certain amino acids are less important than others, although all of them are probably necessary both for the constructive upbuilding of the body and to supply losses caused by cellular activity, and some of them absolutely indispensable in keeping up the functions of certain cells.

Gliadin, the principle protein of wheat, if fed as the sole protein will maintain the adult body, but if fed to growing animals they will cease to gain in body weight. Zein, the principle protein of corn, if fed even in enormous amounts is totally inadequate to meet the growing needs of the body, and if fed alone will not only fail to maintain body weight but will cause decline both in health and weight. However, if some of the more perfect proteins, such as casein and lactalbumin are added, it is of great advantage to the individual as is shown by renewed health and growth.

With this hasty review we will consider the action of bacteria on amino acids which in themselves are fine culture media for bacteria. When bacteria work on protein they do between the breaking down of the protein molecule into amino acids and the absorption of the acids by the intestine. The products of this action are a series of amines of intense toxicity, for example, from the amino acid arginin, putrescin is formed; from lysin, cadaverin; from tyrosin, tyramin; from histidin, histamin; from the tryptophan group, indol and skatol; from cystin, H_2S , etc. It is thus seen that individual amino acids produce certain amines. It is also known what effect certain types of bacteria will have on certain acids, for example gelatin furnishes neither tryptophan, tyrosin or cystin, therefore indol phenol or H_2S cannot be liberated by the action of bacteria on this substance.

As an example of the powerful action of these amines it has been shown that in man tyramin, the product yielded by the putrefaction of tyrosin, is capable of increasing the

blood pressure from 110 to 180 mm., and in patients with arterial hypertension a tyrosin free diet alone has been known to keep the blood pressure down to 140 mm. As caseinogen of milk yields 7 per cent tyrosin and meats in digestion yield it in large amounts, milk and meats are contraindicated in this condition.

It has been shown that histamin when introduced into the system produces violent bronchial spasm similar to spasmodic asthma, and a diet low in histidin has been known to relieve cases of asthma of years standing. Likewise various amines may effect the nerve centers of the brain causing many obscure and ill-defined symptoms. Oculists and laryngologists of late devote a good deal of study to the intestinal tract as they realize the part played by these amines in eye and ear troubles.

In regulating the diet to prevent the formation of certain amines it should be remembered that the action of bacteria *in the bowel* are not alone responsible for their production and it has been lately shown that many amines exist in cheese of all kinds before its ingestion caused by the action of bacteria on protein. This fact opens a new field in alimentary toxemia as it is reasonable to suppose that any food containing aging protein might carry the same amines that are caused by the action of bacteria in the bowel.

Just what antagonistic effect the specific ferments have on these poisons, it will be impossible to review, but there is no question but that later on these ferments will be shown to have just as important a bearing on acidosis as they have in pregnancy, syphilis and cancer.

At this point the practitioner should be reminded of a class of cases that is met in infancy and childhood in which the line can be drawn with comparative definiteness between it and acid autointoxication, and in which the distinction must be understood both from a standpoint of diagnosis and treatment. I refer to simple food intoxication which is not of a digestive or bacterial origin but a purely metabolic disturbance. It is not brought about by the ingestion of contaminated milk or food, for fresh wholesome cow's milk or mother's milk may bring about the disturbance, nor is it the result of putrefactive or fermentative changes. It is caused when the infant is given more food than it has the ability to metabolize, and it becomes of great concern in diagnosis, as it does not necessarily mean overfeeding though overfeeding is the principle cause. It represents some pathologic state as it is never a primary condition. It most commonly accompanies some intestinal disorder or enteritis, but may occur with any constitutional derangement out-

side the alimentary tract such as pneumonia or nephritis.

The symptoms of the condition are so uniform in infancy that a few words will make the picture familiar to every physician. A baby who "has not been getting along very well" suddenly becomes very ill. Respiration becomes labored and rapid with a characteristic grunt that together with a temperature of 103 to 105 degrees makes one suspicious of pneumonia. It refuses all food but as a rule drinks water freely. It lies with half-closed drowsy eyes as though heavily under the influence of an opiate, but when disturbed for a few moments may assume a frightened anxious expression.

These are the usual symptoms of a rather severe acute food intoxication in early infancy, but in older children the symptoms reveal rather more clearly the character of food at fault. When a child is getting too much fat, preceding the outbreak above described, it becomes pale and restless, the bowel movements are putty-like and of a grayish color. Its tongue is coated and skin sallow, and there is often gastric and intestinal disturbances especially vomiting an hour or two after meals. If the child is old enough it complains of being unwell and appears so poorly nourished that the condition is often made worse by giving him cod-liver-oil, cream and eggs in order to make him more robust. At this point, if the fat is reduced a favorable outcome is almost certain to follow. According to the school of Finkelstein, the fat rarely, if ever, brings about the intoxication but is only a factor in the prodromal stage for the sugar which is the real intoxicant. Next to the fats, the carbohydrates are the most frequent element in producing the condition. It has long been believed that a child with a normal digestion can take care of more sugar than any other form of food, but in these days of modern childhood when cheap impure candy is only too plentiful and the indulgent parent allows it to satisfy its craving for sweet things, it is small wonder that sugar is often at fault. These cases are usually the most perplexing as the child is apparently well but subject to violent attacks of recurrent vomiting, recurrent fever, asthma and diarrhea. The practitioner should be especially careful in the diagnosis of these cases as regulation of diet is the simplest and only efficient treatment, and an early and correct recognition will save the child from going from doctor to specialist with accompanying loss of money to the parent and ill health to the child.

The protein, which has long been the *bête noir* of artificial feeding, is least prominent in simple food intoxication, but as before mentioned the fact must not be lost sight of

that they are probably the most important when it comes to the generation of fermentative and bacterial toxins.

In the treatment of an acute attack of toxemia it should be remembered that the pathology present is not the contents that lie in the intestine, however putrefactive and bacteria-laden they may be, but a hyperacid condition of the blood and body cells. The blood and cells being alkaline have an antagonistic effect on the acids and an attempt at neutralization takes place. As a result the organism surrenders a certain amount of its alkalies, and an attempt at speedy relief should be made, not so much in removing the offending substance from the bowel as in helping to restore the alkalinity of the blood and cells, though fortunately both results may be obtained by the same method of treatment. As the body salts that are called upon to meet the encroachment of the acids are usually those of sodium, potassium and calcium, it follows that the administration of a combination of the salts of sodium, potassium and calcium will act more quickly than a single saline whose chief office would be to clean out the bowel. The manufacturers of such preparations as concentrated pluto water, sal hepatica, etc., have recognized this fact and their products have obtained a wide sale because they are effective, however doubtful their method of exploitation.

When it comes to the treatment of the chronic condition, I do not think any medical man should consent to the surgical "short-circuiting" of the bowel as recommended by Sir Arbuthnot Lane. "With all respect for surgeons who practice this method of making intestinal drainage," says Hale White, "I am inclined to doubt if they know all the means at hand of the general practitioner for the relief of the condition." There is certainly no anatomical reason for the procedure, and experience has shown that while the patient may be benefitted for a few weeks or months, the symptoms of toxicity will return and the patient will be in as bad if not worse condition than ever.

As Bassler believes, a more reasonable theory for a working basis in the treatment of intestinal stasis is that the gut wall, which is constantly resisting the action of bacteria and bacterial poisons, because of this resistance, gradually becomes weakened by a protoplasmic degeneration of the fibres of the coats, the sympathetic system is assailed and we have a dilatation and elongation of the viscus which is comparatively inert so far as any peristaltic action is concerned. This being the case the aim in the treatment would be to establish regular defecation, to increase or stimulate peristaltic action, and, secondarily,

to give food and oils and tonic drugs that will prepare the feces for easy expulsion.

One of the first rules a sufferer with constipation should comply with is regular defecation. After breakfast is usually a convenient time and ingestion of the meal has a tendency to set up some peristaltic action. There is no question but that this practice alone has overcome many cases of beginning intestinal stasis. The patient should be especially urged to always obey even the slightest impulse to go to stool. The stubborn constipation of shop-girls and women in general as well as in men in public and professional life may often be treated to this lack of duty. The rectum loses its sensitiveness to these impressions, the feces gradually accumulate in it, and consequently the whole large bowel is brought into a state of chronic stasis with its accompanying symptoms. Exercise is an important adjunct in overcoming the condition and the outdoor form is the prescription more likely to be complied with by the patient. The various movements that bring the abdominal and back muscles into play are undoubtedly of benefit but they are rarely indulged in for very long at a time by the patient.

The character of the food probably has more to do toward complete relief than any other single agent. The first requirement of food is that it be rich in residue. The eating of easily digested food and under-eating are in themselves the cause of constipation. All vegetables are rich in cellulose and should be taken freely. Next to vegetables the farinaceous foods stand as agents to overcome the condition. Indeed, the life-giving properties of oats as taught by the various rolled oats advertisements depend more on their effect as a laxative than on the nourishment they contain. The patient should be encouraged to eat fruit as it acts in the nature of saline cathartics, prunes, oranges, apples, grapes and figs being very beneficial, especially the latter, as their action probably depends more on the mechanical irritation of the seeds on the bowel wall than in the juices of the figs themselves. Of course, care should be used in the administration of fruits as they might cause hyperacidity, and, in obstructive constipation, by the accumulation of residue in the bowel might make matters worse. It should be remembered that when an acute attack of acidosis becomes engrafted on a chronic condition the diet may have to be changed as some foods have powerful base forming properties while others are acid forming, for example, potatoes, apples, raisins, and cantaloupe are base forming foods while, meats, cereals and prunes are acid forming.

I have spoken of foods only in a general way but in severe cases it becomes necessary to put careful watch over the diet for several

days. The lactic acid therapy of Metchnikoff, pure milk and vegetarian foods have long been popular, but there is no set rule that can be laid down in all cases. On the start some do better on an exclusive carbohydrate diet while others fare well on one rich in protein. In any case when it becomes necessary to place the patient on a special diet a return to a mixed one as quickly as possible is greatly to be desired.

The drinking of plenty of water should be encouraged in order that the feces might be kept in as soft condition as possible. Drugs can be used with a great deal of benefit and their proper administration will more quickly bring about a cure. The saline cathartics, of course, are out of place in the treatment but occasional small doses to keep the feces soft are not objectionable. The a. b. and s. pill is very effective but these drugs should be given in granule form, say let five or six granules equal one pill. Five or six granules may be given two or three times a day, and then one granule left off as desired results are obtained. The tonic effect of the strychnine may be enhanced by the addition of minute doses of cascarn, ipecac and capsicum to each granule because of their stimulating action on the mucus membrane of the alimentary tract.

From the above paragraphs it will be seen that the two essentials in the treatment are sufficient residue and keeping the residue in a softened condition for expulsion. To meet the latter requirement free water drinking alone is not dependable and frequent small doses of the salines are far from the ideal remedy. For some time agar-agar has been used to keep the feces soft, but this is unsatisfactory because not only is it not very laxative but in case it is not expelled forms an excellent culture medium for bacteria.

The medicinal agent that has been employed most extensively in the last three to four years to soften the feces is liquid paraffin or mineral oil. It is not absorbed, is non-irritant and does not change chemically. It should be taken on an empty stomach because otherwise it might cause nausea and regurgitation that become so unpleasant its use will have to be discontinued. It has the disadvantage of being rather unpleasant to take and in very constipated individuals has to be reinforced by cascara or some other laxative for awhile.

In conclusion, if the writer were the most talented of essayists and most thoroughly versed in the subject, this paper would be incomplete because positive knowledge of this most frequent and troublesome of ills is incomplete. However, if a careful and conscientious study of the symptoms here set forth will save a patient from the surgeon's knife

or restore a weakly child to health the practitioner should feel most thankful for even the incomplete knowledge at our command.

It is unnecessary to make any extensive bibliography of this paper as it has not been the aim of the writer to bring out anything original in its production. Probably twenty-five different authors have been drawn from and it is intended rather as a review of the later teachings of some of the more prominent aspects of this important subject.

THE DOCTOR AS A BUSINESS MAN.*

By G. G. THORNTON, Lebanon.

I first want to assure you that I have nothing new to bring to you. You all know that the truths to which I shall call your attention exist, but possibly you have never seen them expressed just as I shall try to do.

The doctor is supposed to be a professional and not a business man, and this supposition is in the main correct, though in my opinion the profession is gradually attaining more and more to business proficiency. In time gone by, but which many of you older men can remember, the doctor was expected (and he rarely disappointed the expectations) to answer all calls, regardless of the weather or the time of day or night, without asking any questions about the pay or the prospects for pay, and when the work was done after a long wait he was expected to apologetically mention the matter to the head of the family by explaining that he needed the money. The prevailing opinion seems to have been that the poor fellow or some of his family were sick and that the doctor could and should administer to his needs from a humanitarian standpoint, and trust to chance for his remuneration. At this time too, it was no uncommon thing for the man who did pay his bill to think and so express himself, that he and others who did pay, paid enough above the worth of the services received, to pay for the non-paying neighbor. This may have been true in days gone by and more or less satisfactory to all concerned, but times have changed very much in the last few years, and our profession must, if it continues to hold the high standard which it has assumed—nay which it occupies, adjust itself to the business methods of the present. There are many reasons for this. In those days the educational standard was so much lower, the cost of preparation to enter on a professional career was almost nothing as compared with the first cost of a medical education and equipment now. Then the proportion of men who could and would pay their bills was much greater than now. Then the science of medicine was

advancing so slowly that it was not so expensive nor difficult to keep abreast of the times, while now with the science advancing by leaps and bounds, it is both expensive and difficult, to keep up in literature and instrumental equipment. The average young man now thinking of preparing himself for the profession, and who expects to open an office in a progressive town or city, should understand that he will need enough money by the time he graduates and equip himself with books, instruments and office outfit, and horse and buggy or automobile, to buy a small farm. He should also consider that when he places his money in this education and equipment that it is practically all dead capital, except when he is well and working. That should he become incapacitated for work on account of loss of hearing, sight, sickness or accident, he can realize very little on his investment.

When a doctor dies, as a rule, his reputation and fame count for very little as assets to his estate, the original amount invested in an education ceases to be a revenue producer, and the investment is worthless. His books have become a back number and sell for probably less than one per cent of their original cost, and his instruments go for a song, because of the fact that those who need things of this kind already have them, and those who don't need them have no use for them. Statistics gathered by the Kentucky State Medical Society show that the average income of the general practitioner is from \$800.00 to \$1,000.00 per year. I feel that this is surely too low, but if it is approximately correct surely something is wrong somewhere. I maintain that our charges should be such that competent services will bring an income of from 3 to 5 times that amount and still, not keep us working all the time night and day. Of all men we need as much as any, time in which to refresh ourselves, to attend medical societies, to see some of the world as it is, and to prepare ourselves to lend a hand in the molding of public opinion, which we often have such splendid opportunities for doing. In my opinion the doctor whose income is not above \$1,000.00 per year is either not getting what his services are worth, or is too incompetent to deserve a place in our profession.

For years back and up to the present there has been a tendency for surgeons to find fault with the general practitioner and accuse him of not sending his surgical cases to them early enough, and I am tempted to ask if it is possible for all these cases to come from the underpaid general practitioner? Many times I have had men tell me that Doctor So and So, who is now dead, used to do their practice for \$2.50 where I charge them \$3.50 and that he did their practice for \$3.50 where I do it for \$5.00, and I have had them

*Read before the Taylor County Medical Society.

tell me the same about others who are still living, and I meet this by telling them that I consider myself a better doctor than that and that I don't see how a real doctor can afford to work for such fees. I explain to them that a horse and buggy out of the livery stable, which is no better than mine, would cost \$1.50 to make such trips, and that my time or any other first class doctor's, ought surely to be worth as much as a machinist and that he would charge for livery hire and at least sixty cents per hour for his time. Many people need to have such lessons pressed on their attention. I have had men who lived in the country try to engage me to do their obstetrical practice for \$10.00 and want me to make a complimentary call at that. I have had one man whose home is at Phillipsburg, tell me that he had had two babies born at different times into his family and that he had a doctor both times and that both cases only cost him \$15.00. (Would you have me tell you where he said that doctor lives?) I have had men come to me and tell me that they wanted me to do some insurance examinations for them if I would agree to do it for \$3.00 and when I told them that our regular fee for that work was \$5.00, I have had them go away and afterwards they have told me that they succeeded in having it done for three dollars.

Many people seem to expect their doctor to wait forever, or almost forever, for his pay, and who think a doctor is in a "mighty big hurry" if he insists on his pay within one year after the services are rendered. Now, these people need a little free advice along this line, and if doctors when they meet up with one of this class would just explain to them that if everybody did the way they propose to do that many doctors would have to seek other employment for a living. In my opinion it is part of our business to educate our clients up to the point that we are really professional men, and not common laborers, who are willing to work on short pay and wait a long time for that. We should explain to them that when a person is sick he always should have, and that he usually wants a competent doctor, but that in order to have such a one he must necessarily be well paid. No man can do efficient work whose income is not sufficient to allow him to live without worrying about his debts or as to where his living is coming from.

A number of years ago an old farmer, a good friend of mine, said to me, "You are making more money and making it easier than any of us farmers," and my reply in substance was that I was willing to admit that I was making more money than some farmers that I knew of, but that I was working night and day, every day in the week, whereas he

never worked on Sunday, nor at night and that he always attended county courts, shows, picnics, fairs and sales and could leave his farm almost any time for a few days in the care of some one else and feel sure that everything would move along just about as well as if he were on the job, while I had to stay with my business and could intrust it to no one. I explained to him that in case he should die his wife could realize about as much out of his farm and stock as he could himself, whereas mine could realize nothing from what I had invested in an education, and but very little from my books and instruments, etc. Many people need to be shown these things and it is up to doctors to show them. For a doctor to have an income of not over \$1,000.00 per year places him below the railway postal clerk and the rural route carrier and about on a level with a first-class carpenter or blacksmith with the difference in favor of the latter. The doctor works or is ready to work all the time whereas the others work only a given portion of their time. I am hardly willing to believe that the average collection as given by the State Society is true of doctors in this vicinity, and hope never to see the time when such shall be the case. In my opinion it is part of our business to keep it from becoming so. The surgeon as a rule is a better business man than the general practitioner, some of them even pushing their business to the point of dividing fees for referred cases, and some not even finding fault with him (expressing themselves to friends and relatives) for not having managed the case in a more scientific way. His work is more spectacular, and appeals more to the laity's sense of business, hence about the first inquiry, after considering the seriousness of the operation, is what will be the cost? This is agreed upon and these fees I am persuaded, are paid willingly and promptly. It is part of our business to see that all cases that are strictly surgical, and which we are not prepared to handle in a strictly up-to-date manner reaches the surgeon with as little delay as possible, and I may add, with as little bias against the knife, as is right. It is our business as well as our duty to keep all cases which can be so kept, from reaching the need of a surgeon by giving them the proper treatment, and to keep all cases where an operation could do no possible good, from falling into the hands of the man who regards everything as grist that comes to his mill.

Surgeons pride themselves, and justly, on their low mortality in this day of anesthesia, sepsis and trained assistants, but it is our business as well as often our painful experience to know, that not every one who gets off of the operating table alive, is restored to

good health, or even benefited, and knowing this it is our imperative business to be so informed about the results to be attained, or to be expected in an average case of the one under consideration that we can give the patient a fairly accurate forecast as to the ultimate results, in order that particular patient may know how to decide intelligently, whether he or she, is willing to incur the expense, and take the risks of anesthesia and the operation, however slight they may be for the end to be attained.

It is our business when handed a lemon by the surgeon, to whom we have referred a case to protect ourselves by seeing that henceforth cases referred by us go elsewhere, on the principle that self preservation is one of the first laws of Nature. Many people seem to think that we always have our calls come at the very time which suits our convenience most, that they are always on good days and good roads, that our work is fascinating, clean and pleasant, that our cares or concerns for those under our care are not burdensome to us, that the pay is always good, our fees fat and juicy, our life one gala day of pleasure and that we are living on the fat of the land without much effort on our part. It is business to inform those who think thus and to disabuse their minds of this erroneous idea. It is our business not to be continually carping about our troubles, but to occasionally take time to explain that there is possibly no calling so arduous (save that of the soldier in active campaign) as that of the active general practitioner. His early life spent hurried in his books, often with his mind filled with wonder as to how he is to make both ends meet, days, weeks, months and sometimes years come and go while he sits in his office with chastened patience and anxious solicitude, for patients who seem slow to appreciate his ability. Then when business does come his way, he is rushed hither and thither, early and late, hot and cold, facing dangers in dark nights on bad roads, dangers from infection and contagion and in a thousand ways that many people never dream of. Tired and worn from work day after day and night after night, often for weeks at a time he hardly knows what it is to get an undisturbed night's rest, frequently to administer to the suffering of some one who could and should have waited till the next day or should have had a doctor the day before. Occasionally called to see those who never pay doctors' bills when he feels worse than the patient whom he has been called to attend. It is our business to sometimes explain these things.

There are some people who have been unfortunate in life and have neither dollars nor sense, that need a doctor occasionally and want one often, and occasionally they also

need a trained nurse, a cook and some other things but it is not our business to furnish all of these things to them, neither is it our business to furnish all or any part of them, not even all of the medical attention they need, much less all that some of them would like to have furnished. Let us admit that they are just simply unfortunate, honorable but worthy people, why should the doctor furnish them with all the medical attention they need any more than the miller furnish all the bread stuff they need or the merchant all the clothing and groceries they need? Of course the doctor should be willing (and he always is) to furnish his part, but I contend that these people should be helped by their neighbors and I am sure that doctors are willing to divide up with them in all cases. In the country each neighborhood would only have a very few of these to help but if the doctor takes in all the neighborhood, he has so many that if he did attempt to do it all, his time would be all taken up by this class of work. Possibly some of you are ready to say oh, we should be charitable! If so I would like for the man who is real busy with people who want his services and are able and willing to pay for them, who would be willing to leave his warm bed some dark, rainy night, to go a distance of seven or eight miles up brush creek into a little shack of a house where he could not find enough cover to keep him warm if it is in winter and he should have time to catch a nap and where he could not sleep for the bugs if it should be summer, to attend some poor woman in labor, knowing positively that he was going to get nothing for his service, I say I would like for him to hold up his hand.

Did you ever think of it that as a rule the more difficult the place where these people live is to get to the more likely you are not to get your pay? Then suppose they put up the pay for one visit and the case requires 20 or 30 or even more visits, and as you are into it, are you not up against a real proposition? How charitable do you feel towards that fellow when he needs you again in three or four years if he has not paid you? Do you let George do it? Then there are some people who always have a doctor when they are sick and sometimes have the very best that can be had in their locality, and they never pay any of them in coin of the realm. They work one doctor, who is the best doctor in town as long as he will work without the pay and then when he calls the next man he usually tells him what an awful bill doctor blank made against him and occasionally he recites a number of grievous mistakes he made in his practice. He don't stop with talking to the doctor about you but he feels it incumbent on him to give some reason to his friends for changing

and as the true reason would reflect on him he proceeds to give one that is not true. To his friend you are in too big a hurry about your pay and send a statement before you dismiss the case and you are the highest doctor he ever saw.

After working all the doctors in town these people usually move to some other town where pastures are equally as good picking as these have been. It is our business to see that these dead beats are put on a proper footing and not allow our profession to be so easy for them.

There may be and doubtless are people who are much more charitable than I, but I am persuaded that there are none of the profession who would give as freely of his time and services to the real dead beat as we sometimes have had we have known his true inwardness of heart. It is the real deadbeat mostly that goes into court with his malpractice suits against the doctor. It surely is our business to know these fellows and protect ourselves against them. By doing so we can thereby have more time to do real charity, and will conserve our health and strength to feel more like doing it. It is our business to appreciate the fact that real charity given as such is appreciated by the receiver and the kindly "thank you doctor" expressed more in the eyes than in the words, is often followed amongst friends and neighbors by kindly expressions that bring rewards from those who are more able. The man who can pay for your services and don't will make no effort to speak the kindly word about you.

For the dead beat the most effectual way to protect ourselves is for doctors of every locality to furnish each other with a list of these fellows and then agree not to work for them except, first for cash or with security, second in case the man who has been listed by one doctor has also been patronizing another and paying him, the latter can still continue to do his practice, third, in cases of accident left to the option of the doctor called, fourth any one who wants to answer one of these calls can feel perfectly free to do so by informing the party that he is doing it purely for charity. This latter provision will give those who desire to do more charity than others an opportunity to do so.

When one of these movers first calls you find out where he is from and who has been his physician and what he thinks of him and then immediately write that doctor, enclose a self-addressed stamped envelope to him and find out how his client treated him and ask him to give you in confidence his opinion of him as to honor, etc.

It is our business to stand solidly together that we may in every legitimate way further each other's interests and to make our rela-

tions more congenial. We of the profession to-day stand on the labors and sacrifices of those who have preceeded us in the centuries that have passed, and are permitted to enjoy the fruits of their labors, and it is our business to labor and to build that those who come after us may find things better by virtue of the fact that we have existed.

SOME REFLECTIONS ON THE HEALING ART.*

By J. F. YOUNG, Monticello.

Since this society has given me the opportunity to select a subject as I see fit, I have elected to steer away from the beaten paths for this evening, with the hope that I may add some joy to the members present if not profit.

Then what matter it, if for this time I forget my logic and rules of rhetoric, or be serious, or mirthful or poetic?

Then will you follow me for a short time, while I ramble about amid these reflections on the healing art.

During the last half century every field of human endeavor has felt the quickening impulse of this advanced and fast age. The human mind has been growing, expanding and bringing order out of confusion and combining events and influences for the betterment of mankind. In no department of learning has there been greater results reached than in the medical world. Men of great learning and personality have thrown their life force into this work.

Money is coming in as endowments to give strength and power; one university has received millions of dollars in the last few years, which will give it a power and influence undreamed of in its past history.

The millions given by one philanthropist a few years ago, has enabled men to carry on some investigations which affected every medical school in North America; it has driven some of the unworthy out of existence and will drive others out; at the same time it will help all the great and deserving schools to a higher efficiency of usefulness. We trust this money will not be used to promote any particular sectarian school, but will be used with this motto: "We search earnestly and honestly for the truth, and appropriate every means found that will relieve suffering humanity, no matter in which school or creed found."

Medical learning is in a stage of transition. Out of the misunderstandings, out of the superstitions, out of the vast amount of literature on man and his ailments, out of the creeds and isms of the ages, there is slowly

*Read before the Wayne County Medical Society.

but surely evolving a regular school of medicine which will stand preeminently above all other schools. Other schools always will exist for there are millions of people who seek mystification and the unknown. This school of medicine of the future will not put stress on the virtue and power of drugs alone to heal the sick.

It is true every plant and mineral that has not been gathered, will be; and will be investigated chemically and physiologically until we have a definite knowledge of its potential power to produce a given physiological effect under known and certain conditions.

This, then, is the age of exact scientific medication. We must know the physiological action of each remedy we administer. Within the last half century the cause of almost every diseased condition of a contagious or infectious character has been worked out definitely; this leads to specific medication. If we have a patient who has imprudently overloaded the stomach and is suffering from this condition, we know we have a remedy in apomorphine or ipecac that will relieve him. If we have a patient with a weak heart we know we have a remedy in digitalin that will make that heart work with more force, or if the heart is hammering away with great force, we know we have a remedy in veratrum that will calm the heart and soften the pulse.

If we have a patient suffering some agonizing pain we know we have a remedy in morphia that will banish that pain and frown and pinched expression from the face and crown the brow with a halo of joy.

If we have a patient with a broken bone we know we have a remedy in the anæsthetic that will suspend all sensation and hold the patient between life and death until the broken bone can be adjusted.

No greater boon has been given to poor, mortal man than this general anæsthetic, by its power to suspend sensation, surgery has made a most marvelous advance in the last twenty years; it has enabled the surgeon to go into the very citadel of life with his cold steel and thread and needle and restore to life, home and loved ones, many a one who, otherwise, would go to a premature grave.

The microscope has in very recent years lifted the veil off of an invisible world to us. As we look down through it we see millions of pathogenic organisms. These lowly forms of life are responsible for a very great per cent of all the suffering and death in the human race. They are responsible for puerperal septiceemia, influenza, meningitis, pneumonia, measles, scarlet fever, dyspepsia, typhoid fever, hydrophobia, the great white plague and a great many other pathological conditions. In this class of cases, the vaccines, antitox-

ins, serums and phylæogens, will in the near future be our first, if not our only remedies.

Beyond all this class of cases that can be relieved by drugs or vaccines there are many other forms of sickness that must be reached by some other means.

There is perhaps twenty millions of people in the United States treated every year for forms of sickness that do not come under the class I have referred to in the foregoing pages and are not relieved by drugs, serums and antitoxins.

In this class of human frailties which I shall now bring before you is the great field of speculation.

Here the theorist finds his most prolific field. Here it is that the charlatan and the pretended's purse grows fat on the gullibility of poor frail man.

We have those with us who are fear-sick, joy-sick, society-sick, fashion-sick, jealousy-sick, sin-sick, religiously-sick, disappointment-sick, love-sick, home-sick and a long list of other mental conditions which must and will be treated.

These cases should at all times be treated by the regular profession upon scientific methods and not be allowed to drift to the hoodoo man.

These are real cases of sickness and must be treated but not by drugs or vaccines.

This is the class and these are the people who keep the patent medicine on the market.

This is the class and these are the people whom the charlatan and the pretender appeal to with success.

This is the class and these are the people who have helped to multiply the number of church denominations.

This is the class and these are the people who have organized so many "isms" and creeds in the healing art.

This is the class and these are the people who follow John Alexander Dowe and Mrs. Eddy in their unscientific and false theological teachings.

Far away across the fields of the centuries at the dawn of historic time the medicine man was groping his way in darkness; songs, incantations, charms, superstition, ignorance and hoodooism were his chief remedies.

Scientific medical knowledge was locked up in man's brain and possibilities, as the rose is locked up in the bud through a long winter night.

In those far-off times men were healed by the direct power of God. Ex. 15:26: "If thou wilt diligently hearken to the voice of the Lord thy God and will do that which is right in his sight and will give ear to His commandments and keep all His statutes, I will put none of these diseases upon thee which I have brought upon the Egyptians, for I am the Lord that healeth thee."

As the years slipped away into the centuries, Jesus came into the world to set up a spiritual kingdom. He healed all manner of sickness and that, too, without medicine. "And Jesus saith unto him, I will come and heal him."—Matthew 8-7.

This was the man sick of palsy. Jesus said unto the Centurion, "Go thy way and as thou hast believed so be it done unto thee." And the servant was healed in the selfsame hour.

Was it faith, and by whom? Matthew 10:1: "And when he had called unto him his twelve disciples he gave them power against unclean spirits, to cast them out and to heal all manner of diseases."

Acts 14:10: "The same heard Paul speak who steadfastly beholding him and perceiving that he had faith to be healed, said with a loud voice, stand upright on thy feet and he leaped and walked."

I make these quotations to impress the fact that spiritual healing, faith healing, mind healing, had their beginning before scientific drug healing and is not to be scoffed at or taken lightly, but to be looked into earnestly and with a desire to find the truth and the facts. These stand preeminently by right of age. Here, then, we stand on the border line between the mind of one human being and that of a great subject.

There is an invisible connecting link between another. The veil has not been rolled away and we do not see the soul and life with our physical eyes as an open book, yet wireless messages pass in silent hours which may change the hopes and destinies of many a one for weal or for woe.

Faith and thought are the elements that have wrought their marvelous and sometimes apparently miraculous cures.

Many an old splint and bandage and crutch were left at John Alexander Dowie's door, as he claims, in answer to prayer; he taught that the existence of a physical body afflicted with disease because the devil controlled it. He cured hundreds.

Mrs. Eddy cured thousands and founded the sect of Christian Scientists; she taught that there is no physical body, no sickness, that these things exist only in the mind.

These teachings are absolutely opposite and both can not be true.

It is a problem of mind cure and the elements of cure are not in the correctness of the theological teachings, but the intensity of the faith in the idea of the sick person. It is the new thought, the faith, the intense belief that cures and not one particular system.

The mind is that part of man which thinks. It is the inner man, the soul, the thinking being. It is this living, thinking being which dwells within the physical body that rules supreme in the living human being.

The brain is a physical body and is the central station through which thoughts of the soul are made manifest to the outward world. These thoughts are real entities produced through and by the brain and are sent out over the living nerves as impulses and we taste, feel, hear or speak or give expression, by some physical means. It is this thinking and sending out of wrong impulses over nerves or system of nerves, which makes a function pathological.

By some external influence, or a cause you may not be aware of, there may be produced, or coined, or created, in your brain a thought that you have heart disease, the moment this thought is portrayed upon your brain, an impulse is sent down to the heart and causes it to work with greater force or to waver. At once the will takes control, and a finger is placed on the radial artery, and on finding that the impulse of the heart's beat does not coincide with your preconceived idea of the normal, this intelligence is dispatched to the brain, then a new and stronger impulse is hurried to the heart. The circuit is now established and you have a real imaginary heart disease. You are possessed of a thought and it must be cast out.

In an unguarded moment some external influence may cause an evil thought of murder to be created in the brain, and still in unguarded moments and days be retained. Every day and hour that this thought is retained it makes a deeper impression and takes more room in the mental laboratory. This thought will grow more and more bold, wear deeper grooves over the part of the brain which is retaining it until it takes complete possession and sends out overwhelming impulse after impulse to take the life. He is possessed of a devil and it should be cast out.

Then the problem for the doctor in these cases is to know how to cast the thought out of the mind which is causing the abnormal condition or sickness, and cause the soul through the physical brain to coin or create a new and health-stimulating thought to take the place in the brain. To do this he must know human nature, and be able to read the life lines of his particular patient and have the penetrating power to break through all of his defenses and see and know what the thoughts are which must be cast out.

His next problem is to know how to bring into existence the new thought. A normal health-stimulating thought. A correct physiological thought.

Each case is a law unto itself. First of all, you must get the attention. This may often be done through very ordinary things or events. Sometimes the daily occurrences of life may be your means of reaching one. You may appeal to others through some social

problem or church work. The attention of another may be secured through some beautiful poem:

"The purple, the gold, the crimson rays,
Have set the western sky ablaze:
They burn on the fading light of day,
Like soldiers dying in the fray."

or,

"Full many a gem of purest ray serene.

The dark unfathomed caves of ocean bear,
Full many a flower is born to blush unseen,

And waste its sweetness on the desert air."

Still another may be reached by the melody of some beautiful words well rendered in song. You may get the attention of another of greater literary attainments by talking to him of the beauties of Calculus, or of the joys of digging out the Greek roots, perusing the Latin and plodding over the higher sciences in his school days.

Still another may be reached through that grand old classic poem:

"Of man's first disobedience and the fruit of that forbidden tree,

Whose mortal taste brought death into the world
and all our woe,

With the loss of Eden till one greater Man restored us,

And regained the blissful seat."

To illustrate one phase of what I have been saying, I will report one case, by your permission.

Early one bright moonlight night in October some years ago I received a hurried call to a country home some miles out from town. Being well mounted and having a good road, I was soon at the old farm house. There were about twenty people standing about in small groups as I rode up to a tree to tie my horse, some fifty yards out. One man came out to meet me and hurriedly told me of his patient. He said he had been with her for thirty-six hours and she was suffering an intense headache that heroic doses would not relieve. She was in a stage of great excitement and wild to an extreme degree. A number of means had been applied. Hydrotherapy had been used until the clothing, bedding and even the house was all dripping wet, with no relief.

The patient was a young woman of twenty summers whom I had never previously seen. Some six or eight women had spent the last ten hours in holding her in bed. As I waved them back they turned her loose, a wild shriek rang out on the still, clear night air: "Let me go, I am going to die."

With her raven black hair streaming down over her bare shoulders and back and her dark eyes flashing defiance at those who had been holding her captive; she sat bolt upright in bed.

The house had now been filled with the friends and the curions. As these stood around

in silence like neglected statutes in a long forgotten art gallery, I asked her to be silent for a moment and look into my face while I took both of her hands in mine and pressed them firmly together. Every muscle was in a state of excitement, every nerve fiber was greatly distressed. Her bust rose and fell in unison with the waves that surged and rolled through her soul.

I caught her eyes. They were dark, wild and searching. Then came a long intense silent gaze. Was I looking at the soul of a raving maniac, or was I in communion with a soul suffering intense agonies from some real or imaginary wrong?

The intense silence was oppressive. In a low voice I asked Dr. S. to give a teaspoonful from a bottle I had taken from my case. With a shudder she recoiled from this. With a firm grasp I pressed her hands and looked deep into her eyes.

In three minutes I asked her to go down on her pillow, this she did, and kept that steadfast and penetrating look into my face until I felt the cold chills creep over me. Impulse after impulse and wave after wave rolled through her soul until my face grew hot and flushed and my eyes faltered for a time. Soon all was still. The great wave of torture ceased to surge. In a low voice from the silent group a whisper came. "Is she dead?" Another, "Its all over, poor child."

I waved for silence and told them "no," that her eyes had closed in peaceful sleep.

I thought now is the storm over, while she is out somewhere, oh somewhere, in the great self-forgetting happy dreamland.

I gave instructions for only one person to stay in the room over night, and in half an hour I had returned and invited sleep, but it was long delayed in its coming, wrapped now in the darkness and silence of the night my mind wandered afar afield, and I thought now of mother, home and heaven and that troubled soul.

To go down to the last analysis, the foundation of all medical learning is to know the physical body of a human being, with its soul that thinks and wills and lives. The body with its telegraph, batteries and wireless stations. With its bones and tissues and fluids. With its hundreds of chords and bands and pulleys and levers. With its mills and laboratories and refineries and factories. With its furnaces and refrigerators and repair shops. With its rivulets and rills and rivers and locks and dams and pumping stations. With its cargo of new material forever bounding away on the crimson tide to the hands of the master builders. With its dark and turbid stream freighted with the debris from the repair shop. With its picture galleries and memory walls and thinking stations. With

its hopes and doubts and fears. With its loves and joys and sorrows. With its wonderful, mysterious, secret and silent chambers of thought and life and self.

MULTIPLE FRACTURE OF LOWER END OF HUMERUS—OPEN OPERATION.*

By GUY P. GRIGSBY, Louisville.

In reporting this case I wish to acknowledge my indebtedness to Dr. Garland of the interne staff of the City Hospital for his assistance in the operation, subsequent treatment of the patient and for his co-operation in getting up this report.

Miss May H., age 30, white, admitted to the City Hospital on February 27th, 1914. Came into the hospital for fracture of the lower end of the right humerus. Family history is negative except for specific history in the father. Patient is well nourished and in fact suffered from obesity. Gives history of hereditary syphilis, evidenced by recurrent attacks of iritis and the appearance of mucous patches in the mouth. Several years ago the patient had both tubes and ovaries and uterus removed and suffers from the resulting nervous symptoms.

On the night of February 26th, 1914, patient fell on the street injuring her right arm and was brought into the hospital. Examination the next morning showed the elbow joint greatly swollen and ecchymotic. Arm was fixed and was unable to be moved. A complete fracture of the lower end of the humerus was easily made out, the upper fragment being nearly compound as it was just beneath the skin posterior.

An X-ray picture was taken and under anaesthesia an attempt was made to reduce the fracture and put the arm in acute flexion. The reduction was not satisfactory and attempts to flex the arm were abandoned because of the fear of making a complete fracture due to the sharp end of the upper fragments. The arm was then put at a right angle and open operation was decided upon. On account of the great amount of swelling we decided to wait until this had subsided. So consequently twelve days after the receipt of the injury the patient was subjected to an open operation.

An incision about five inches long was made on the posterior aspect of the elbow. The sharp lower end of the upper fragment was just beneath the skin and pushed through the triceps muscle. The muscle was split and the lower fragments exposed. There was a wide separation of the fragments. The lower fragments were displaced forward and the space

between the two was filled with a blood-clot as large as an orange. This was cleaned out and the fracture extending into the joint was clearly shown. One fragment comprised only the internal condyle, with a bridge of bone about three inches long and a half inch in width. This bridge was extremely thin because a piece had been chipped from its outer surface. All of the structures in front of the joint were dissected loose from the bone by the blood clot. They were apparently uninjured. The hemorrhage was evidently due to rupture of vein in the injured triceps muscle. The fragment composed of the internal condyle and the bridge of bone was comparatively free of the surrounding structures with the exception of being slightly attached to one portion of the internal lateral ligament. This fragment was freed and removed. A clear view was then obtained of the transverse fracture about two inches above the condyle. This fracture was oblique, leaving a sharp end on upper fragment and this is what had pushed through the triceps muscle. By the use of instruments the fragments were approximated, but were difficult to maintain in position because of the obliquity of the opposing surfaces. We deemed the only way of holding them in position was by the use of a steel plate. Accordingly a plate was adjusted and the fragments and plate held in position by a Lambotte clamp, while the holes were drilled and the screws inserted. After this was done and the clamp removed the fragments were held in very firm apposition. The arm was flexed several times with no appreciable movement in the fracture line. We were then confronted with the problem of dealing with the fragment composition of internal condyle. We decided to put it in position and endeavor to nail it to the other condyle. This was done by the use of an ordinary four-penny finishing nail. This apparently held the fragments securely. There was no way of securing the upper end of this fragment as there was only a very thin spicule of bone. The opposition of the fragments after fixation was all that could be desired. However we were afraid that the internal condyle might work loose, since it was only fixed at one point. The tricep muscle was sutured with cat-gut and a small cigarette drain was left in the cavity from which the blood-clot was removed, the skin closed with cat-gut and the arm put up in moderate flexion in a molded plaster splint. The patient's temperature following the operation varied from normal to 101. She suffered very little pain. Temperature was normal after about the seventh day. The small drain was removed the first twenty-four hours. The wound healed without infection. At the end of two weeks, passive motion was attempted but gave patient pain and it was

*Read before the Jefferson County Medical Society.

discontinued for another week. After that the arm was given massage every other day, and passive motion instituted. After the third week slight crepitus was noticed and we judged this was due to the loosening of the internal condyle. We thought perhaps this might become attached later and since there is no crepitus at present we hope that such is the case. The patient was discharged from the hospital on March the 25th wearing only a sling and use of the arm was in moderate amount encouraged. At the present time she has really full range of motion of her arm and is able to attend to any of her household duties.

I feel justified in the report of this case because of the nature of the fracture and the impossibility of any hope of a satisfactory result under any treatment other than operation.

Dr. Bayless has very kindly consented to show the X-ray plates that show very clearly the fracture before and after the operation.

DISCUSSION.

Jno. W. Price, Jr.: I wish to congratulate Dr. Grigsby upon the excellent result obtained in this case. The open operation is certainly the procedure of choice in this class of fractures. To-day I saw a young man, about nineteen years of age, who had fallen from a horse when he was eight or ten years of age, and had sustained a fracture apparently very similar to the one in Dr. Grigsby's case. Open operation was not done, however, and the result as seen to-day is that the arm is fixed in a semi-flexed position, having a range of motion of only two or three inches. The upper part of the arm is completely withered and looks very much like the arm of an individual who has had infantile paralysis. He is unable to do any carrying with this arm. An attempt at carrying produces severe pain and subsequent aching which disturbs his rest at night. He is able to use the forearm to a limited extent, and also has the use of the hand, because the muscles below the elbow are not so atrophied. I believe that open operation will give this boy some relief, but the proper time to do the open operation is immediately after the injury, that is, within two or three weeks. When done at a subsequent date, there is less chance of securing a satisfactory result.

W. Barnett Owen: Dr. Grigsby is certainly to be congratulated upon the excellent result obtained in this case, especially when we consider the report made by Dr. Thomas, of the Cook County Hospital, Chicago, of a series of cases operated upon by the open method for the reduction and cure of fractures, in forty-seven per cent. of which the plates had to be removed subse-

quently because of infection and necrosis of the bone.

I had the pleasure of being present at this operation, and also saw the patient prior to operation, and I agree with Dr. Grigsby that it was a typical case for the use of a plate.

Wonderful advances have been made in the past few years in the treatment of complicated and obstinate fractures, and possibly in many instances plates have been applied where the condition was not suited to that method of treatment. In other cases, the plating has been improperly done. To my mind the most decided advance in the open method of treating fractures is the bone inlay. However, I think the procedure followed by Dr. Grigsby was the one best suited to the condition present, as the injury was so close to the joint that it would have been almost impossible to have transplanted sufficient bone to have held the various fragments in apposition.

Jno. B. Richardson, Jr.: The principal objection which has been advanced to the use of the Lane plate in the treatment of fractures, is that the screws fail to hold. Evidently, however, in Dr. Grigsby's case, they have done so.

At the last meeting of the Mississippi Valley Medical Association, Dr. H. R. Allen, of Indianapolis, presented what appealed to me as a very practical device for overcoming the above objection. He introduces an aluminum arm through each of the fragments, and solders them together by means of electricity, in such a manner that it is impossible for any motion to occur in the line of fracture. In addition to this, he has a very clever device for pulling the bones apart. He tries to get them just short of apposition. His method appears to be a most practicable one. I believe, however, that in Dr. Grigsby's case, with the injury so close to the joint, the use of the Lane plate was the proper procedure, although Allen claims to use his method successfully in the treatment of fractures of the neck of the femur.

F. T. Fort: In my opinion, fractures at or near the joint are ideal cases for the use of the Lane plate. Of course, each case must be a law unto itself; fixation is the principal thing in securing a functioning joint. If the fragments are not fixed and pull apart, more callous will be thrown out, which will impinge upon the joint and more or less immobility will be the result. In fractures between the joints, the bone should not be plated, because in following this procedure we oppose Nature's method of healing the fracture by throwing out callous, but where the fracture is at or near the joint, we can get much better results from plating.

A. David Willmoth: I wish to discuss this very interesting case from only one standpoint; that is, with the method used and that suggested by Dr. Richardson. The use of any foreign material in the treatment of a fracture is a very

important matter, because, in many cases, it is necessary at some subsequent time to go back and remove it. Some of you who examine this woman will have noticed that the arm in the region of the plate was very tender to the touch, and it is very probable that, at some future date, it will become necessary to remove this foreign body from the site of the fracture. The numbness in the arm may be due to the pressure of the plate, or what is more likely, the callous is impinging upon the ulna nerve, as she says that this numbness did not develop until some days after the operation. There is very little doubt that the use of the plate so close to the joint will give rise to some disturbance in the near future. Just as soon as the patient begins to use her arm to any extent, the plate will undoubtedly become loosened and it will be necessary to take it out.

I particularly wish to commend the method referred to by Dr. Richardson, which was presented by Dr. H. R. Allen, of Indianapolis, as a most practical method of securing union of fractures which are most difficult to hold in place. I think it is far preferable to the Lane plate, because it is not necessary to make an incision in the skin.

Chas. Farmer: Dr. Grigsby has certainly obtained a most excellent result in this case. The motion at the joint is very good and, except for slight limitation of extension and flexion, she has a very good arm.

I believe Murphy teaches that fractures about the joints should be kept fixed somewhat longer than in Dr. Grigsby's case, claiming that slight motion in the joint or in the fracture causes more callous to be thrown out, and tends to limit the subsequent degrees of mobility.

Dr. Willmoth spoke of nails or screws introduced into the bone working loose. I believe that is true where infection develops, but where the technique is perfect they very seldom work out. I do not believe that Dr. Grigsby will have any trouble from this course at this late date.

B. F. Zimmermann: The treatment of fractures in and around the joints is oftentimes a very puzzling matter. I believe that, in the future as in the past, the majority of fractures will be treated by the closed method. However, there are cases in which better results may be obtained from the open method. In fractures about the joint more than in any other location, it is necessary to have perfect anatomical alignment and adjustment of the joint surface, and here of all places, it is necessary to hold the fragments in perfect apposition, because any movement of the fragments means irritation, increased amount of callous, and consequent limitation of motion. Dr. Grigsby is exactly right in his suggestion with respect to passive motion. He carried it out in his case until it caused pain, which is the surest indication that it should be discontinued. He then desisted, and used gentle

massage, subsequently returning to passive motion. Passive motion should not be employed in the upper extremities until after two or three weeks. If it causes pain, it is an indication of irritation, and if persisted in will cause more callous to be thrown out and consequent limitation of motion.

The various devices and methods for the treatment of fractures are becoming exceedingly numerous, each one claiming that his method is the best: I believe success depends upon the technique employed at the time of operation.

If there is one criticism I would make in connection with Dr. Grigsby's report, it would be that he attempted to move the fragments to see if they were being held in perfect apposition. It requires very little movement to loosen the screws slightly, and, once begun, that loosening will continue until the screws will no longer hold.

As to the method mentioned by Dr. Willmoth, it would appear that so much traction on the bones would produce a certain amount of pressure necrosis, and cause the device to become loosened the same as the Lane plate.

A. C. L. Percefull: Dr. Grigsby is certainly to be congratulated upon the result obtained in this case, and he is to be more congratulated if he does not have any further trouble from this plate.

At a recent meeting of the Association of Military Surgeons, in Cincinnati, Dr. Albee, of New York, read a paper on this subject, in which he advocated the employment of the bone inlay method in preference to the Lane plate. Any method that eliminates the screws used in connection with the Lane plate deserves our earnest consideration, because we know that these screws will, sooner or later, become loosened from pressure necrosis if not from infection. Dr. Albee has devised an instrument consisting of two little parallel circular saws, by means of which he can saw out a section of bone of any desired width, which is determined after making a groove in the fracture. This section of bone then fits into the groove in the fracture with exactly the right pressure. Instead of screws he used little bone pegs. These are made from a slip of bone taken from the tibia for instance. He has an instrument with which he shapes these pegs, making them exactly the size of the bone drill, so that they fit in snugly. This bone is not absorbed, but simply grows in place and holds the fragments in apposition quite as well as the Lane plate. Its advantage lies in the fact that it does away with the subsequent loosening of the screws and plate and obviates the necessity for further tinkering with the wound. To prove that the bone does not become absorbed, he presented a specimen of a bone in which he had introduced a slip of bone, showing that callous has been thrown out and it had become united.

W. C. Dugan: I wish to add my congratula-

tions upon the excellent result obtained by Dr. Grigsby in this case. I have always been opposed to the introduction of foreign bodies in the treatment of fractures, but there are cases in which they must be used. However, where we do a fixation operation, it should be by the open method. I believe the method suggested by Dr. Richardson would have been a failure in this case, for the reason that the fragments of bone had pierced the tissues and it would have been practically impossible to have gotten the line of fracture together. The open method is best because we can see exactly what we are doing. Even granting that in this particular case the plate must be subsequently removed, I believe its use was fully justified. However, I do not believe the removal of the plate will be necessary. It has become thoroughly encysted by this time and there is no infection. If removal does become necessary, it will be a very trivial affair and can be done under a local anesthetic.

After all, the plate simply serves to hold the fragments in apposition until a permanent dressing can be applied. If we depend upon the plate and do not apply a fixation dressing, we will not get a good result. After the permanent dressing is applied, we rely upon the splints and not upon the plate.

Guy P. Grigsby, (Closing): I wish to thank the gentlemen for their discussion. In this case the plate has served so well that I cannot help but defend it a little further. This woman had a fall about a week ago, throwing her whole weight upon this arm. Those of you who examined her may have noticed the ecchymotic area which is present. Up to the time of her fall, last Tuesday, this patient had no tenderness over this spot and I am inclined to believe that the tenderness now present is due to that fall. This is the first time I have seen her in two months, and in that time there has been considerable increase in the range of extension and flexion of that arm.

As to the bone inlay method, there is no question that it is the method of choice, both theoretically and practically. In this case, however, those of you who inspected the X-ray plate will have noticed that the patient had a very small bone, and if I had made a groove in this bone I do not believe it would have held a sufficient amount of bone to have held the fragments together. The plate required only two small screw-holes and very firm union was secured.

I do not believe it will be necessary to remove the plate in the future. However, if the woman remains in town it is my intention to watch her and make a subsequent report of the case.

DUODENAL LAVAGE.*

(REPORT OF CASES.)

By R. R. ELMORE, Louisville.

I desire to report two cases and offer some indications and a technic for duodenal irrigation. Miss S., came under my observation June, 1913, age 65, with decided obesity and flabby musculature, pronounced general jaundice, tenderness in right hypochondrium, daily range of temperature 100 to 104. Pulse 100 to 110, history of repeated chills followed or accompanied by high temperature and heavy sweats, sensation of weight, pain and discomfort in stomachic and hepatic regions of long standing but of recent aggravation. Diagnosis of cholangitis and cholecystitis with probable stone in hepatic or common duct.

A competent surgeon pronounced the patient an unsafe surgical risk. Duodenal irrigation with soap and saline solution was resorted to a few times, patient then refused more treatment of this character, and some weeks later made a fairly good symptomatic recovery. How much influence, if any, duodenal lavage exerted on the pathology of the case, I am unable to say.

Mrs. W., housewife, age 40, seen April, 1913, gave a typical history of paroxysms of gall bladder colic with jaundice, with sensation of weight and pain in gall bladder region between attacks. All suggestions of surgical assistance were promptly and positively refused. Duodenal irrigation with salt and soap solution gave relief from subjective symptoms, some tenderness persists over gall bladder region. Irrigations were given twice weekly for 3 or 4 weeks, then omitted for a like period. Treatment was followed in 1 or 2 hours by copious evacuations. This meager clinical report is offered to provide an opportunity to call the attention of the general practitioner to some of the indications he may encounter for the use of duodenal tube, which has been attracting some attention. From the following classification it is not to be understood or implied that the possession and use of a duodenal tube, a bag of salt and a bar of soap are the sole requisites for a successful practice of medicine, nor are the pathological conditions mentioned to be attacked in this manner, but only those obstinate and intractable types which do not respond to the usual procedure of treatment.

A liberal classification of indications for duodenal irrigation consists of toxic symptoms arising from the digestive system and disordered metabolism, and structural changes in the alimentary canal and biliary tract.

*Read before the Jefferson County Medical Society.

Under the toxic division we may refer many cases of primary and secondary anemia and a long train of symptoms springing from intestinal and colonic stasis as seen in neurasthenia, neuritis, melaucholia and dementia. While in disturbed metabolism we may find rheumatic changes, gout, arthritis deformans and asthma.

Twelve cases of toxic vomiting of pregnancy have been reported treated by duodenal irrigation with cessation of symptoms in all cases, one treatment being sufficient in most patients. A solution of 4 to 6 grams of granular sodium sulphite to liter of water being used. This solution appearing at anus within thirty minutes from the time the last of the solution is introduced into the tube.

Stomachic lesions as in inflammatory changes of mucosa, ulcers, gastric dilatation and all conditions which may be benefited by suspended activity of gastric function may be benefitted by the use of the duodenal tube to bridge the stomach, depositing suitable food directly into the duodenum with an alkaline mixture. All primary inflammatory phenomena of small and large intestine may be attacked in a direct manner. That catharsis cannot perform the work of lavage or irrigation, is established by the benefit derived from colonic lavage, not only in conditions relating to the colon directly, but indirectly as well, such as catarrhal changes of biliary outlet, when the irrigation fluid enters the duodenum it permeates every part of small and large intestine, in direction of normal peristalsis and secures an efficient house-cleaning.

The Jutte duodenal tube consists of a one-sixteenth inch thin soft rubber tube, thirty inches long, distal end is perforated and carries a steel ball, a stylet and auxiliary tube of fourteen inches completes the outfit.

TECHNIC OF INTRODUCING THE TUBE.

No food should have been taken into the stomach for eight to twelve hours—the stylet is inserted into tube, which is moistened and with patient in sitting posture, head thrown back and mouth open, is quickly introduced and stylet withdrawn. Auxiliary tube is attached, twelve to sixteen ounces of water is given the patient by mouth, after which patient is requested to lie on right side with head and shoulders lower than the pelvis and practice deep breathing. If this posture is not assumed, it is advisable to attach an aspirating bottle to the auxiliary tube and in a few minutes expression of fluid starts which is soon of greenish color. After the siphonage is completed an irrigator is attached and the medicinal fluid is started through the intestine. The rate of flow should be slow and of interval duration. The introduction of one or two quarts requiring about one hour, the

character of the irrigating fluid is determined by the indications. In gall bladder conditions I prefer salt and soap solutions. Have observed that patient is more comfortable on the right side during irrigation. This position is unfavorable to regurgitation of fluid into stomach. The flow of fluid may be facilitated through the intestinal tract by manipulation or vibration applied to abdomen.

From my modest observations and from enthusiastic clinical reports, am inclined to the opinion that duodenal irrigation is a procedure of merit, in therapeutics and may be resorted to in some stubborn conditions with relief to the patient and satisfaction to the physician.

Being sceptical as to the exact location of the distal end of the tube, I requested Dr. Keith to take some roentgenograms. So far as I know this is original experimental work and results prove conclusively that the tube does bridge the stomach and pass into the duodenum.

Dr. Keith has taken much interest in this work and I will ask him to display the pictures taken.

DISCUSSION.

R. Hays Davis: Some time ago I became interested in the subject of duodenal lavage, and bought one of these tubes. I have had very little experience with it, having used it in only one case of general ptosis with stasis. This patient had very distressing symptoms, which were rather obstinate, and the use of the tube was not followed by particularly satisfactory results. However, it must be of considerable value in many cases, if one can judge from the enthusiastic reports that have been made. The theory is certainly worthy of study. After the injection of this solution, there usually follows a very copious bowel movement—more copious than could possibly be obtained from any saline cathartic. Therefore, it would seem the intestines must be more thoroughly cleansed than could be accomplished by the ordinary means, and that it is of value in cases that do not respond to other measures, especially those in which a severe grade of intestinal toxemia is present.

Jno. B. Richardson, Jr. I have a tube very much like this one, and I think it is the most satisfactory means of removing the stomach contents for examination that I have ever employed. The patient places it on the back of the tongue and takes a swallow of water and it goes into the stomach. Then, by means of a small suction pump, the contents of the stomach are removed with ease, and with the least discomfort to the patient of anything I have ever tried. It is a tube very similar to this one, but with a somewhat larger lumen.

R. R. Elmore, (Closing): The only contraindi-

eations to the use of the tube that occur to me now would be aneurism, or any cardiac affection. I would not consider it safe to use the tube under those conditions, because there is always the tendency to vomit, accompanied by the stress and strain consequent upon introducing any foreign body into the stomach.

NEWS ITEMS AND COMMENTS

Louisville, Ky., March 14th, 1915.—Dr. Rudolph Matas, New Orleans, La.—Dear Doctor: A short time ago while I was in the East a young man came to my office stating that he represented the Medical Index Company of New Orleans, and that you were one of the largest stockholders. He went about getting subscriptions from doctors and told my Secretary that he had gotten quite a few.

In the issue of the Southern Medical Journal just out there is a warning to doctors against a fraud and the proposition mentioned in the Southern Medical Journal is like the one presented by the young man. I am wondering if it is not the same and am writing to ask if there is such a company.

Very truly yours,

HENRY ENOS TULEY.

March 14th, 1915.—Dr. Henry Enos Tuley, Louisville, Ky.—Dear Dr. Tuley: It is quite evident that the so-called "Medical Index Company" represents an organized and widespread conspiracy to rob doctors and victimize a number of other innocent people who have been heard from in Cincinnati, Columbus, Ohio, Indianapolis and Chattanooga. The representatives of the so-called company absconded from New Orleans, where they had rooms at the Maison Blanche Building, without paying their rent, defrauding a number of people, including the furniture dealer and stationers who had furnished their offices.

I know nothing about these people and especially the man Beck who appears to have been the leader of the gang. He not only defrauded the Doctors but robbed the poor canvassers whom he had engaged to solicit his fraudulent subscriptions. Among them are a number of poor, innocent women, whom he left stranded far away from home after he had despoiled them of their profits and commissions. He must have had a considerable number of fellow conspirators.

It is important that wide publicity should be given to these facts in order that the medical and general public may be informed of the fraudulent character of this so-called "Medical Index Company" and warning them of their nefarious practices.

Thanking you most cordially for your valued cooperation in this matter, I remain

Very truly yours,

R. MATAS.

The Seventh Pan-American Congress will meet in San Francisco, June 17th-21st inclusive. It assembles pursuant to invitation of the President of the United States issued in accordance with an act of Congress approved March 3, 1915.

The countries and colonies embraced in the Congress are the Argentine Republic, Bolivia, Brazil, Canada, Colombia, Cuba, Chile, Costa Rica, El Salvador, Ecuador, Guatemala, Honduras, Haiti, Hawaii, Mexico, Martinique, Nicaragua, Panama, Paraguay, Peru, Santo Domingo, United States, Uruguay, Venezuela, British Guiana, French Guiana, Jamaica, Barbadoes, St. Thomas and St. Vincent. The organization of the Congress is perfected in these countries and the majority of them have signified their intention to be represented by duly accredited delegates.

The Congress will meet in seven sections, viz: (1) Medicine; (2) Surgery; (3) Obstetrics and Gynecology; (4) Anatomy, Physiology, Pathology and Bacteriology; (5) Tropical Medicine and General Sanitation; (6) Laryngology; Rhinology and Otology; (7) Medical Literature.

All members of the organized medical profession of the constituent countries are eligible and are invited to become members. The membership fee is \$5.00 and entitles the holder to a complete set of the transactions. Advance registrations are solicited and should be sent with membership fee to the Treasurer, Dr. Henry P. Newman, Thinkin Building, San Diego, California.

The general railroad rate of one fare for the round trip, good for three months, made on account of the Panama-Pacific Exposition at San Francisco, and the California Exposition at San Diego is available for the Pan-American Medical Congress.

The Palace Hotel will be headquarters.

The First Pan-American Medical Congress was most successfully held in the United States in 1893. Five intervening Congresses have been held in Latin American countries. It now devolves upon the medical profession of the United States to make this, the seventh the most successful in the series.

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NEXT MEETING STATE ASSOCIATION, LOUISVILLE

COUNTY SOCIETY REPORTS

Boone—The Boone County Medical Society met with Dr. H. H. Hays, at Bullittsville, March 17, 1915, where a most elaborate supper had been prepared, and after that had been well taken care of the meeting was called to order by President H. H. Hays. Members present were Drs. Hays, Senour, Menifee, Yelton and Nunnelley.

Visiting guests were, Drs. McKim, Langsdale, Phinney and Cofield, of Cincinnati. Drs. Laymon and Walton of Sayler Park, Drs. McChord and Slater of Ludlow.

It was moved and seconded that Drs. Laymon and Walton be made honorary members of the society.

The papers for the evening failing to show up next in order was case reports. Drs. Menifee and Langsdale reported a very interesting surgical case.

G. F. McKim read some interesting reports on prostatitis, bringing out in full the proper method of massaging the prostate, which was very instructive and was discussed by the members.

A very unusual case was reported by Drs. Hays and Menifee of the tolerance patients may have for certain drugs, which was discussed by all.

Being no further business to come before the society it was moved to adjourn.

Next meeting to be at Burlington.

S. B. NUNNELLEY, Secretary.

Barren—The Barren County Medical Society met in regular session in the office of Dr. A. T. Botts, Glasgow, March 18, 1915. Members present, Smock, Ferguson, Botts, Acton, Porter, Turner, Miller, Taylor and Howard. President Porter called the society to order. The minutes of last meeting were read and approved.

Drs. Botts, Smock, Ferguson, Miller and others reported several interesting cases, and the discussion which followed was highly enjoyed by everyone present.

S. J. Smock read a splendid paper on sanitation, in which he urged physicians to do their full duty in educating the masses on sanitary subjects. He emphasized especially the defects of our water supply, and made some valuable suggestions for improvements along these lines.

The paper was discussed at some length by several members, which resulted in the appointment of a committee to agitate the subject among the people, and to urge our city council to consider more seriously the unsanitary condition of our town. S. J. Smock, R. H. Porter and C. C. Howard compose said committee.

John T. Godby, of Cave City, made application through Dr. L. S. Trusler, for membership in this society. Dispensing with the regular rules, his application was considered and he was unanimously elected to membership.

After arranging program for next meeting, the society adjourned to meet April 24, 1915.

J. M. TAYLOR, Secretary.

Breckinridge—The Breckinridge County Medical Society met in the office of the Secretary, J. E. Kincheloe, in Hardinsburg, on March 10, 1915.

After the meeting being called to order and the minutes of last meeting having been read the following physicians answered present: R. W. Meador, D. S. Sphire, A. M. Kincheloe, J. E. Mathews, J. S. Shoemaker, J. E. Kelly and J. E. Kincheloe. The evening was spent very pleasantly and profitably by reports of cases by the members present.

D. S. Sphire reported a very rare and interesting case of "Hysteria"—a girl of thirteen. Suppression of urine for twelve days, no great elevation of temperature, gave her twelve grains of morphine hypodermically; twenty-fours without any results as far as sleep was concerned. Gave cathartics and diuretics with no results. Case was taken to Dr. Abell, Louisville. Under complete anaesthesia. Kidneys began to excrete. No further trouble following this procedure. He also reported a case of miscarriage with decomposed foetus. Curried and put in packing. There were no further visits made by physician. Patient removed gauze and made an uninterrupted recovery.

J. E. Kelly reported a case of orchitis coming on four months after a case of gonorrhea. On discussion it was the consensus of opinion that it was of gonorrheal origin.

R. W. Meador reported several cases of gonorrhea that he had on gonorrheal vaccine treatment with the promise of giving a further report on his results.

H. M. Kincheloe reported a case of "Hysteria" in which he first saw the patient in an unconscious condition. She convulsed from the slightest noise. He suggested to the nurse in charge that should she have another convulsion to shave her scalp and apply a bran poultice. This lady had a beautiful suit of hair and was very proud of it. There was no recurrence of the convulsions.

The society adjourned to meet June 8, 1915.

JOHN E. KINCHELOE, Secretary.

Christian—The Christian County Medical Society met in regular session in the Avalon, Hopkinsville, Tuesday, March 16th, the President in the chair. Those present were Drs. Gates, Backus, Harned, Riley, Barker, Keith, Held, Stephens, Woosley, Bazzle, Haynes, Lacy, Watts, Wright, Riley, Barker, Rudd, Allen, Erkiletian, Gaither, Rice, Hatcher and Sandbach.

After the reading and adoption of the minutes and correspondence the following cases were reported.

J. H. Barker reported a case of attempt at

suicide. A steel jacket bullet passing through the upper and left portion of chest, penetrating the lung. Patient doing nicely with a fair chance of getting well.

W. S. Sandbach reported a case of premature labor at the seventh month. With an unexpected rupture of the bag of waters followed with pain in the back, and twenty-four hours later with a severe hemorrhage, no pains, very slight dilatation, followed in twenty-four hours with labor pains and some dilatation but not much advance in labor. Gave an anesthetic and delivered with success.

Discussed by Drs. Roszczell, Wright, Watts, Barker and Keith.

W. W. Rozzell read a very excellent and timely paper on "Medical School Inspection."

J. W. Harned read a splendid paper "A Review of the Harrison Law." Not a member present failed to discuss these papers and the meeting proved to be one of the liveliest for many seasons.

W. S. SANDBACH, Secretary.

Daviess—The Daviess County Medical Society met at the City Hall, Owensboro, on Tuesday, March 16th. Thirty-five members were present, including Drs. Louis Frank and James T. Windell, of Louisville, visiting.

The President and Vice President were absent. The meeting was called to order by the Secretary and Dr. C. H. Todd called to the chair.

Allen L. Kincheloe, who has located in this county, presented a transfer card from the secretary of the Breckinridge County Medical Society, stating that he was in good standing with dues paid for 1915. He was admitted to membership.

The secretary read a communication from the State Secretary, also one from the National Secretary.

J. S. Denton stated that Dr. M. A. McDonald was absent in Florida seeking health, and moved that we send him a telegram of good cheer, stating how much we missed him, and hoping that he would soon be restored to health and be with us at our June meeting. The motion was seconded and carried.

Our President, C. DeWeese has moved to Clinton. The Vice President, Geo. L. Barr, becomes President, and E. D. Turner was elected to the office of Vice President.

A. McKenney read a paper on "Some Observations on the Tonsils." A very animated discussion followed. It was engaged in by Drs. D. M. Griffith, W. F. Stirman, J. Glahn, R. N. Filiatreau and S. J. Harris.

J. H. Harris read a paper on "Pellagra," at the afternoon session. Discussed by Drs. A. McKenney and J. A. Kirk.

E. D. Turner read a paper on "Neurasthenia." J. F. Harrison, J. A. Kirk, J. T. Windell and W. F. Stirman, discussed this paper.

A motion was made and carried that we employ a stenographer to take down the discussions.

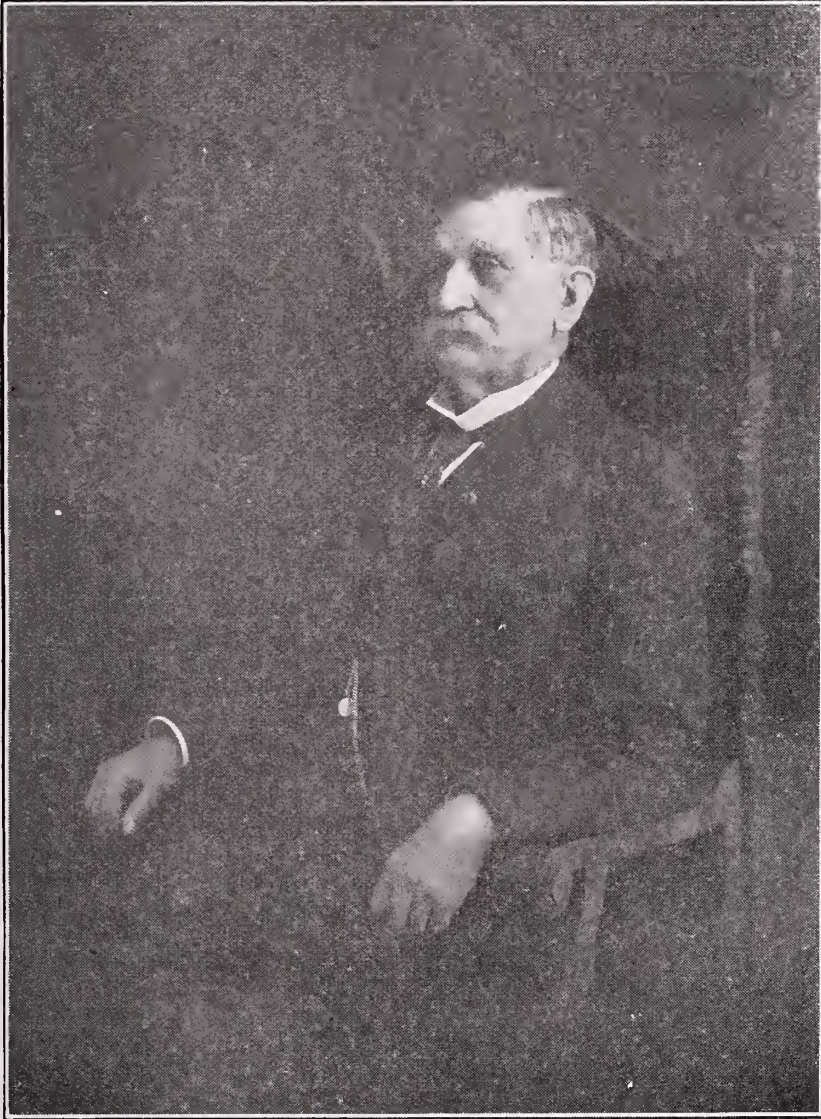
After this a general discussion of the Anti-Narcotic Law was engaged in.

J. J. RODMAN, Secretary

Franklin—The Franklin County Medical Society met in regular session March 2nd, 1915, at

in regard to the removal of Dr. J. W. Hill, to Dallas, Texas, which were adopted and ordered spread upon the minutes:

Resolved, That the Franklin County Medical Society express its regret upon the departure of Dr. J. W. Hill, of this city. We will miss a member who has always stood for the best aims of the profession and has always tried to co-operate



DR. U. V. WILLIAMS

FRANKFORT, KY.

7:30 p. m. Minutes of previous meeting read and approved. Routine business soon disposed of.

H. C. Kehoe of the F. M. I. being regularly proposed and application censored, on motion was unanimously elected to membership in the society.

H. S. Kellar offered the following resolutions

with his brother physicians in carrying them out.

Several years ago Dr. Hill, then Superintendent of the Feeble Minded Institute, entertained the Franklin County Medical Society and here made a strong plea for greater unity. At that meeting was initiated the movement by him that

resulted in a more uniform scale of charges, much to the benefit of the profession.

We regretfully give him up but offer him to Dallas, Texas, as a good man, a good doctor and a "good fellow."

A banquet, at the Frankfort Hotel, was tendered by the society to Dr. Williams, celebrating his sixtieth anniversary of the continuous practice of medicine, at which the following guests were present: His Excellency, Governor Jas. B. McCreary, Drs. W. E. Allen, S. L. Beard, F. L. Beard, of Shelbyville, A. H. Barclay, J. A. Stucky, W. B. McClure, G. F. Sprague, B. F. VanMeter, J. F. Warren, Jno. D. Maguire, of Lexington, L. J. Toll, G. D. Lillard, of Lawrenceburg, Louis Frank, Carl Weidner of Louisville, J. W. Crenshaw, H. C. McCauley, S. A. Blackburn, of Versailles, J. L. Dorsey, of Millville; Curtis Austin, of Bagdad; O. B. Demaree, of Mt. Sterling; W. R. Williams, Mr. Leroy French, Drs. Minish, Garrett, Fish, Kehoe, Patterson, Coblin, Stewart, Wallace, Barr, Kellar, Ginn, Heilman, Jackson, Montfort, Wilson, Hill, J. P. Stewart of Frankfort. Telegrams were read by Dr. L. T. Minish from Dr. Sidney J. Myers, of Louisville; H. C. Dowdy, of New Albany; Chloe M. Jackson, of Lexington; Fithian & Daugherty, of Paris; Miss M. P. Jones, of Lynchburg, Va., letters from Dr. Cheatham, of Louisville; Col. L. M. Maus, U. S. A., Governor's Island; Dr. J. A. Lewis, of Georgetown, besides fifteen other congratulatory letters that were not read for want of time.

Dr. Louis Frank, of Louisville, acted as toastmaster in his usual happy and felicitous style. The speakers were Dr. U. V. Williams, Gov. Jas. B. McCreary, W. E. Allen, L. J. Yoll, and others in repartee.

Dr. Williams address in response to felicitations of brother physicians was as follows:

My Kind Friends:

I am deeply grateful and profoundly thankful for the compliment of this assemblage and your presence here this evening. I feel it an honor as unmerited as was its inception unexpected, and esteem it due to my age rather than to any merited condition on my part. The Romans said, "Whom the gods love die early." I hope the converse. When a man gets old enough to have common sense, they call him a fossil, and begin to scratch the moss off his back, looking for the label B. C.

I stand here like a sentinel on the watchtower to proclaim the hour of the night and to announce that "All is well and that God reigns," realizing the mutation of all earthly things. There is nothing true but Heaven.

The pleasures of my youth, and the realization that all has passed, and that my shadow is lengthening towards the East and the early friends are gone to that country from whose bourne no traveller e'er returns, awakens in my

heart this sentiment that inspired Moore when he penned the lines:

"The harp that once through Tara's halls
The soul of music shed,
Now hangs as mute on Tara's walls,
As if that soul were fled,—
So sleeps the pride of former days,
So glory's thrill is o'er,
And hearts, that once beat high for praise,
Now feel that pulse no more.

No more to chiefs and ladies bright
The harp of Tara swells;
The chord alone, that breaks at night,
Its tale of ruin tells.
Thus freedom now so seldom wakes,
The only throb she gives,
Is when some heart indignant breaks,
To show that still she lives.

Why have I been permitted to encumber the earth for four score years? I have smoked and chewed and semioccasionally drank, but never have taken a drink except on the advice of the best available physician each time, in the fear of the Lord. I have been reasonably honest, have tried to do as I was done by, have never embezzled or misappropriated to private use that which belonged to another, have scrupulously avoided being custodian of any trust fund because I feared to be tempted, have constantly prayed "suffer me not to be tempted above that I am able to bear, and make a way for my escape, and love me freely." I have tried to love my neighbor abundantly, but am ashamed to say that largely depended upon who was my neighbor (it is easier to love some better than others). Especially have I loved my friends and hated my enemies. I have never turned my back on either. My word has usually been taken at par without an affidavit. I have at all times been honest, and have had a constant and decent regard for women, many of whom I count among my best friends, and those whom it was easier to love. I have never failed to help the needy to the extent of my ability, and have at no time been sparing of my good advice to them—liberally given. I have worked every day of my life and have never lacked for food or raiment, and have found it more blessed to receive than to give. I have always cast my bread upon the waters, hoping it to return to me pound cake.

This is a wonderful age in which we live. During the four score years of my life more progress has been made in science, art and invention than in all the previous centuries of the world's history. Time will not permit me to even catalogue the most important. Suffice it to say that since 1833 the railway, steamship navigation, the telegraph, telephone, wireless telegraphy, X-ray, gas and electric lighting and the common lucifer match, and a thousand other achievements, now

so indispensable, had their inception and their birth. During the sixty years of my practice of medicine, anesthetics, antiseptics, chemical, analytical and synthetical evolution has revolutionized the science and the art of medical practice, as well as this theory and fact. Embryology, the germ theory, and the functions of the leucocytes, the revolution surgery wrought by the use of anaesthetics—by the invention of the process by which anti-toxins are developed, diphtheria, tetanus and hydrophobia and numerous other fatal maladies have been conquered. The function of the ductless glands, the white corpuscles, the animal extracts—these are only a few of the achievements wrought during my experience. Then we had no thermometers, no hypodermic syringes, no chemical analysis of the urine, no microscopic examination of the blood or the finding of the various bacilli. Oh, it is easy to practice medicine now; but when we analyze the character of Bessie and the "Bonnie Briar Bush," by Ian Maclaren, it is not overdrawn. The endocrine function of the gonads will obviate the "Twilight Sleep". Such real characters. I, myself was a miniature Weelum McLures, and there were hundreds and thousands of others, and God grant that each of us, when we come to lay our burden down, may find a Drumshengh who will pray for us, "Almighty God dinna be hard on Weelum McLures for he's no been hard wi' any body in Drumtochty. Be kind to him as he ha been to us for forty years. Forgive him the wrong he maw ha done, and do not cuist it up to him. Mind the folks he's helped—the women and the barnies (babies) and give him a welcome home, for he's sure needen it after his work. Amen."

Toast responded to by Dr. Barkley on the night of March 2, 1915, at a banquet to Dr. Williams in Frankfort, Kentucky:

"Toast to Dr. U. V. Williams."

By Dr. A. H. Barkley, Lexington.

For generations down the professional line
The name of Williams ran,
And everybody understood
'Twas a part of Heaven's plan,
That U. V. Williams should be
A very famous man.

Indeed, the fortune-tellers all
Declared 'twas Heaven's design,
That U. V. Williams should be
A something quite divine,—
The flower of the Medics,

To U. V. Williams, le the bard
Whose lyric is tuned to idle praise—
His locks unshorn, his face unmarred
By sweat and grime, his hands unscarred
By daily toil—in dulcet lays,

In empty word and hollow phrase
Recount the annals of the great.

His life from sun to sun was daily rife
With bootless toil and ceaseless strife;
Whose sturdy frame is made to feel
The summer's flame, the winter's steel.

In pouring rain, where torrents flowed
And sheen and shadow come and go,
Astride the sorriest of nags
And armed with spur and saddle bags,
He onward worked his weary way;
And be it night or be it day,
He never faltered nor looked back
Adown the steep and rugged track,
But sets his teeth and onward plods,
Himself a clod among the clods.

His face bears marks of patience trained by
years of care,
His glasses, shifted oft with easy grace,
Great coat, large pockets, and abundant hair
Marked him—Physician—one whose calm, wise
air

Can bid the raging fever sink to rest;
And turn to smiles his patient's weary stare,
While children wonder at his bottle chest,
And how a slow pulse tells him just what pill
is best.

He has now reached the zenith of his glory
And well may poets recount his long life story,
For sixty years of arduous work
Which he discharged without a shirk,
For in love he practiced and in patience taught
The sacred art that battles with disease,
Nor stained by one disloyal act or thought
The holy symbol of Hypocrates.

And now he's on the shady side of life,
Freed from care and professional strife,
And may the remaining days of rest
Prove to be his very, very best.

Cumberland—The Cumberland County Medical Society, met in the court house at Burkesville, Kentucky, April 7, 1915.

Those present were: A. W. Sharp, W. C. Keen, H. G. Davis, John G. Talbot, and W. F. Owsley.

The following program was arranged for the next meeting:

W. C. Keen, "Hemorrhoids, and Their Treatment."

John G. Talbot, "Trachoma, Diagnosis and Treatment."

A. W. Sharp, "Fevers and Their Treatment."

H. G. Davis, "Tuberculosis, Diagnosis and Treatment."

W. F. Owsley, "Puerperal Fever, Preventative and Treatment."

W. S. Taylor, "The Value and Propriety of Keeping Vital Statistics."

J. E. Bow, "Diarrheas, Diagnosis and Treatments."

J. E. Myers, "Pregnancy, Extra-Uterine, and Diagnosis."

J. R. Webb, "Small Pox, Diagnosis and Treatment."

J. W. Bowman, "Neurasthenia, Diagnosis and Treatment."

This was our second meeting, but I feel like it was our first one as we did nothing at the first meeting but organize, with this program for our next meeting we are expecting to get down to hard work.

W. F. OWSLEY, Secretary.

Greenup—The Greenup County Medical Society met at Greenup, April 1, 1915, at Dr. Morris's office.

Members present: Frantz, Fritz, Vidt, Morris, Bryson, Meadows, and Hunt.

J. A. Frantz read a paper on "Dysentery" which was very interesting and was discussed by all members present.

The next meeting will be held at Fullerton on May 6, 1915, at the Davis Hotel, 3:00 p. m. All members are requested to attend.

A. P. HUNT, Secretary.

Henderson—The Henderson County Medical Society held its regular meeting Monday evening March 8th, in the basement of the Public Library, with Dr. Neel, the newly elected president, presiding.

Members present: Drs. Cooper, Stone, Quinn, Dunn, Norment, Moseley, Ligon, Floyd and Neel.

The meeting was a very enthusiastic one, each member present taking part in the discussion of Dr. Cooper's splendid paper on "The Diagnosis and Treatment of Malaria."

The doctor handled the subject in a most admirable way, and living as he does in the lower part of the County, adjacent to the Walnut Bottoms, he has probably treated more malaria than any other physician in the county.

The essayist cited some very interesting history of his experience with malaria in the early eighties when quinine was from three to four dollars per ounce, and capsules were almost unknown.

The society extended a vote of thanks to Dr. Cooper for his excellent paper.

The program committee reported the completion of the program for the ensuing year, and the Secretary was ordered to have five hundred copies printed for distribution among the members from time to time as a reminder of the meetings which are held on the second and fourth Monday night in each month.

The report of the committee appointed to select a meeting place for the society made its report, and recommended that the society hold its meetings in the basement of the Public Library

for the ensuing year. The report and recommendation was accepted and the Secretary was instructed to extend a vote of thanks to the Library Board for their courtesy in extending to the Society the use of the rooms.

The Harrison Anti-Narcotic Law came up for discussion, and each member went on record as favoring the law, but the interpretation, until it is better understood, is going to make complication for the profession.

The next meeting of the society will be held Monday evening, March 22nd, when Dr. Stone will read a paper on "Pernicious Anemia," and Dr. Royster on "Eclampsia."

There being no further business the society adjourned.

PEYTON LIGON, Secretary.

Lyon—The Lyon County Medical Society met March 16, 1915 in the office of Drs. Travis and Travis, at 2 p. m. Members present, Drs. Molloy, Kingsolving, Travis and Travis. Minutes of last meeting read and adopted as read. All communications read and adopted as read.

A motion was made and seconded to send all papers read before the society, together with the minutes of each meeting to the secretary of the State Medical Association for publication.

L. P. Molloy read a paper on "Broncho Pneumonia," which was very interesting and was discussed by all present.

There being no further business the society adjourned.

F. M. TRAVIS, Secretary.

Muldraugh Hill—Officers and Members of the Muldraugh Hill Medical Society: Your Secretary begs leave to submit the following report:

During the last year which this meeting brings to a close the society has enjoyed a considerable portion of prosperity. The meetings have been well attended, about twenty-five being the average.

Considering the location from which the attendance comes it might well be noted that Breckinridge and Meade Counties were recently dropped because there was no attendance from these counties, while Warren and Barren were added.

With the present geographical area we note that Green County furnishes one member; Nelson, one; Bullitt, two; Taylor, three; Warren, three; Marion, four; Larue, four; Hart, twelve; Hardin, about twenty; Jefferson, Twenty.

It will be seen from this that the society has about seventy-five members.

Beginning with last year the secretary sent a bill in December to each member for the dues for the following year. Last year twenty-seven members paid these dues. For advertising we received \$25.00. The total revenue is therefore \$52.00. This with a balance of \$6.05 gives us the total assets of \$58.05.

Expenses for the year have been, printing and stationery, \$30.00; stamps, \$22.00; stenographer, \$11.50. Total expenses, \$63.50.

In view of these facts, that is, the limited number of doctors in the counties who attend the society: the fact that one page of our program renders no revenue together with the amount of work necessary to get out a program reaching over seven hundred doctors, I would suggest the following changes, to-wit: that the secretary send bills this year only to those members who will express a willingness to be known as members of the society and who are willing to pay dues therefor. That notice of future meetings of the society be sent only to those who have paid the dues. That the present elaborate program stationery be abolished as the supply is exhausted and it will cost about forty dollars to renew same. That the future notices of meetings be printed upon postal cards.

One of the most unsatisfactory duties the secretary has had to perform is to get the interest of the members of the counties outside of Jefferson sufficiently aroused to contribute to the program. Examination of the program for last several years will disclose the fact that more than half of the program is always contributed by Jefferson county, and recently it has been only by extraordinary effort that the secretary has succeeded in getting any outside papers at all.

As is usual in most organizations, a few faithful members are always willing to do their part and the consequence is they do more than their part while the others slide along and get the benefit.

Hardin county, the seat of the meetings, rarely contributes a paper. Larue likewise: Green, likewise; Bullet, Nelson, Marion, Taylor and Hart usually respond when called upon. The new counties have not been in the society long enough to prove their metal, but these are the facts concerning the others.

It might be well to consider the division of the counties, putting Jefferson down for three papers at each meeting, dividing the other counties in groups of four, four, and three, making it obligatory for the vice-president of each county to secure one paper for the meeting to which his county is a contributor. This would demand but one paper from each county a year with the exception of Jefferson who would constantly furnish half of the program.

I feel this to be an equitable arrangement and it would be certainly to the great advantage of the Secretary. Incidentally, it would make the members of the separate counties take an interest in the showing that their county would make at the meeting.

GAYLORD C. HALL, Secretary.

Meeting called to order by Dr. Aud at 11 A. M. at the City Hall, about eighteen members being present.

Reading of minutes being dispensed with the Secretary read his annual report.

The discussion of the report followed after paying the annual dues. The secretary was instructed to discontinue the elaborate program and advertising and send the program to members only who pay dues and use his discretion in regard to Jefferson county.

R. T. Layman moved that the society be divided into districts as recommended by the secretary, the secretaries of the county medical societies being appointed vice-presidents for their county, said secretaries to secure papers or case reports according to the plan suggested by the secretary. After considerable discussion it was put and carried.

The election of officers resulted as follows: H. R. Nusz was elected president;

J. J. Moren moved that the secretary be instructed to notify the secretaries of the county medical societies that they have been appointed Vice-Presidents of the society from their county and to notify them of their duties. Seconded and carried.

H. R. Nusz was conducted to the chair.

R. C. McChord offered the following resolution:

Whereas, It is known that a civil suit has been brought against Dr. J. N. McCormack, late secretary of the State Board of Health of Kentucky, for alleged misappropriation of the funds of the board, and whereas, we believe this action is the culmination of a series of misrepresentations and insinuations made by certain persons, supposed representatives of the so-called society of medical freedom; before two sessions of the Kentucky Legislature, and after a thorough investigation, disproved by them: and whereas, at the last session of the legislature, a resolution was offered and passed, seconded by Dr. McCormack, who was a member of that body at that time, directing the attorney general to institute a suit against Dr. McCormack in order to forever clear up these accusations.

Now, therefore, be it resolved by the Muldraugh Hill Medical Society, first, that we have every confidence in the honor, fidelity and integrity of Dr. McCormack, and approve, and will stand by him, in his fight made against quackery, illegal practice of medicine, and for the preservation of the lives and health of the people of Kentucky, and the nation.

Second, That we believe he has done this work unselfishly, and practically without remuneration for twenty-four years and now that he is being pursued by this combination, of those he has put out of business, we pledge him our united support and confidence.

SCIENTIFIC PROGRAM.

On motion of Dr. Aud, the society proceeded at once to the reading of the Essays.

John D. Price, of Louisville, read a paper en-

titled, "Acute Suppurative Cholecystitis Complicating Typhoid."

After the reading of Dr. Price's paper the society adjourned for dinner, Dr. McChord making a motion that after dinner the society proceed with the reading of the papers without discussion to accommodate those members compelled to leave early. Carried.

Society reconvened at 1 P. M.

J. J. Moren, of Louisville, read a paper with the title "Drink Plenty of Water."

C. B. Spalding, of Louisville, read a paper with the title "Metastatic Bone Infection."

Chas. H. McChord, of Lebanon, read a paper with the title "Anti-Typhoid Vaccination."

H. A. Davidson, of Louisville, read a paper with the title "Twilight Sleep."

C. H. McChord opened the discussion. Said he had enjoyed the paper of Dr. Price very much and wished particularly to call attention to the fact that these cases were more common than generally supposed but were often overlooked. We should be on the lookout for such complications and prepared to render the patient instant assistance.

C. B. Spalding, discussing Dr. Price's paper, was surprised at the fewness of the operations that had been done for this condition. Recalled but one case in his experience. Thought carelessness or broadness of diagnosis responsible we should act promptly before irreparable harm for the lack of study of this condition. Thought at times due to opposition of family.

F. G. Carroll spoke of the difficulty in acting was done.

T. E. Craig enjoyed the paper of Dr. Price. Thought that one should follow his cases carefully and make careful abdominal examinations daily.

C. H. McChord complimented Dr. Price on his paper and thanked him for his note of warning which would be gladly received.

J. D. Price, in closing, thanked the members for their kindly discussion.

F. P. Strickler discussing Dr. Moren's paper said he didn't drink water himself but explained matters by saying he drank freely of milk. He enjoyed the doctor's paper.

T. E. Craig asked Dr. Moren why cannot some people drink water during certain intervals.

C. H. McChord thanked Dr. Moren for his paper. Thought it contained much information and advice that the doctor should give his patient which is often neglected.

B. M. Taylor advocated free use of water in many diseases. Wanted Dr. Moren, in closing, to answer question propounded by Dr. Craig.

H. A. Davidson suggested that such people who could not drink water at certain times drink other fluid to compensate for it.

J. J. Moren, in closing, said he was unable to explain all the vagaries of our patients. Gives

salt at times to produce a desire for water. Some people drink too much water and they must be restricted.

C. B. Spalding's paper was discussed by Dr. C. H. McChord. Spoke of frequency of tonsillar infection as a basis of focal infection and should, when diseased, be removed.

Barnett Owen thought Dr. Spalding's paper of vast importance. Disliked the term rheumatism: thought joint infections should be properly investigated and located. Some cases result from throat, appendix, teeth, etc. Focus of infection difficult to locate at times.

J. D. Price complimented Dr. Spalding on his paper. Thought these infections occurred chiefly in young people. We should cease speaking of these infections as purely local; they were often hematogenous following lowering of resistance in a certain spot from trauma. Reported cases from injury in typhoid and other diseases.

R. C. McChord thought the subject one of great importance. We should search our cases carefully for foci of infection and not call all cases rheumatism.

Many cases of latent gonorrhea cause trouble. Don't lose sight of this history in searching for obscure joint lesions.

H. A. Davidson congratulated Dr. Spalding on his results in the reported cases. Reported a case of urethritis in a boy four years old which produced an arthritis after a slight injury to knee.

G. C. Hall said concerning focal infection that we must not get the idea that the tonsil was the only organ ever at fault. Sufficient good reasons had already been brought forward to justify the removal of diseased tonsils without making inferences that could not be sustained. The gums, nose, appendix, and urinary tract often harbored foci of infection.

B. M. Taylor reported cases of arthritis due to direct tonsillar infection. Thought one should examine teeth and gums. Should question patients in sequence of trouble in mouth, throat and joints.

C. B. Spalding, in closing, thought that most of these infections occurred in young children. Reports case of young boy with a double amputation due to mistake in diagnosis. Called rheumatism.

In regard to Dr. Hall, Dr. Murphy attributes diseased foci in many organs as a cause of the infection.

In regard to Dr. McChord's remarks on gonorrhoea, spoke of the removal of prostates in old men clearing up joint symptoms as paving the way for work on focal infections.

Spoke of the importance of prompt interference along prescribed lines. The infection of course invades other organs besides bones.

Should watch whole system. Hard to convince patients of the necessity for proper attention.

Discussing Dr. McChord's paper Dr. Davidson commended the paper. Thought the practice a good one and would be continued. Had used the treatment both as preventive and in treatment. Reported cases. Had never seen any bad results.

T. E. Craig said the trouble was the difficulty in convincing the country people that they were not going to be made sick by the injections. Thought a campaign of education by the doctors should be instituted.

C. H. McChord, in closing, spoke of the necessity of the attendants taking the vaccine to prevent infection; especially those coming in close contact with the patient.

Discussing Dr. Davidson's paper, Dr. Craig reported a case of labor in which he had used it.

J. J. Moren asked what the danger of a psychosis was after its administration.

J. D. Price related a case in which he saw the drug used in forceps delivery; patient had memory for pains but not for use of instruments. Thought memory defective. Has seen mental confusion following its use.

R. C. McChord had had no experience in the use of the method. Early reports were unfavorable. Thought it not a wise method to use in the ordinary run of cases. Might be used in certain selected cases. Thought women should realize to some extent the pains of labor and not bear their children in a stupor. Spoke of the uncertain mental effects produced.

F. G. Carroll said in his experience that the plain morphine hastened labor. Asked if Dr. Davidson had found it so.

F. P. Strickler wanted to know what Twilight Sleep was. Told of his experience with the H. M. C. tablets. Reported a case in which it caused great excitement. Thought doctors should avoid methods that are exploited in the daily press under the names usually known.

B. M. Taylor asked Dr. Davidson if he could control the soft parts with this method as well as in the old way.

H. A. Davidson, in closing, thanked the members for the discussion. Spoke of the proper dosage while his gr. 1-6 morphine, gr. 1-200 scopolamine.

In answer to Dr. Moren said scopolamine did produce a peculiar mental state known as "twilight sleep" and that was his definition of the subject in answer to Dr. Strickler.

He recapitulated his experience stating in detail the results of his cases. To a superficial observer it would appear that the woman was getting no benefits at all, as they act as usual but the mental impressions are so hazy that they experience no recollection of pain, that being the peculiar effect of the drug.

One must have a nurse who understands her

business and be thorough in giving the dose so that the patient will not come out from under its influence. Use morphine once; scopolamine repeated as needed.

It avoids the use of forceps and one can protect soft parts preventing lacerations. No records of late mental effects after this method.

Following this the Society adjourned to meet again in April.

GAYLORD C. HALL, Secretary.

Shelby—The Shelby County Medical Society held its regular monthly meeting the third Thursday in March, the 18th, 1915, in Shelbyville at A. Hollenback's with the following members present: Drs. J. N. Smith, S. L. Beard, Eggen, Bland Marris, F. M. Beard, Lawrence, Ray, Nash, Hughes and Allen.

Graham Lawrence, having recently recovered from a severe infection of pink eye gave the society an interesting talk on this disease which was thoroughly enjoyed by all. The discussion was indulged in by all the members present.

J. N. Nash, the president, entertained the society at a four course luncheon which was fully up to Hollenback's standard of well-known excellence.

A motion was passed that Dr. McMullen of the public health service be invited to meet with the society the second Thursday in April when the Kentucky Midland Society meets here and address the society on "Trachoma."

W. R. Ray made a motion, which was passed, that a special invitation be extended to Dr. U. V. Williams to meet with us next time.

There being no further business to come before the society an adjournment was ordered.

W. E. ALLEN, Secretary.

Scott—The Scott County Medical Society met on April 1st with the following program:

A. N. Cain, "Artificial Feeding of Babies."

H. V. Johnson, "Intravenous Injection of Salvarsan."

L. F. Heath read a paper on "Thyroidism."

The three essayists were present with excellent papers which were enjoyed and discussed by the members present. Those present were, L. F. Heath, P. H. Crutchefield, D. B. Knox, H. V. Johnson, R. W. Porter, L. E. Downs, C. T. Lancaster, A. N. Cain, W. S. Allphin, O. T. Hughes. "Our society meets every month and we have a real live society."

D. B. KNOX, Secretary.

Graves—The Graves County Medical Society met Thursday, April 8, in the court house, with probably the largest attendance in years.

The invocation was delivered by Rev. W. M. Wood.

The address of welcome was made by Dr. E. A. Stevens. Response by Dr. I. C. Young, of Lowes.

Officers of the society were elected as follows:

President, J. C. Sullivan, Dublin; Vice President, Stanley Mulins, of Wingo; Treasurer, G. T. Fuller, of Mayfield; Secretary, H. H. Hunt, Mayfield.

The visiting doctors were E. G. Thomas and A. J. Bean, of Marshall county, and Drs. Boyd, Reynolds and Stewart, of Paducah.

Drs. Ray, Pryor and Eddie Riley were added as new members.

Hon. Gus Thomas in a short speech was given an enthusiastic reception.

H. H. HUNT, Secretary.

Blood Injections—A. H. Curtis, Chicago (A. M. A., Jan. 23, 1915), says that there is a surprising failure on the part of the profession to utilize whole blood injections in cases of persistent hemorrhage. Those who have employed it either advocate serum from the lower animals or use a needlessly elaborate technic when human subjects furnish the supply. Animal serum may not always be available and there is the additional danger of anaphylaxis to be considered. Human blood, according to Curtis' belief, has all the beneficial qualities needed, and does not contain elements that are likely to be harmful to the patient. The methods commonly employed are allowing it to stand until the serum separates, or using the centrifuge, and then injecting the serum subcutaneously or intramuscularly. A better and more regularly successful method which reduces the danger of infection to the minimum, consists in injecting whole blood into the patient immediately on withdrawal from the donor. Blood is withdrawn in the usual manner from the cubital nerve of the donor; and the needle is then inserted under the subcutaneous tissue of the back. No haste is required. In special cases when much blood must be obtained at one time, it may be aspirated directly into a sterile bottle provided with a coil of wire, immediately defibrinated and kept in the ice box until desired. Curtis notices especially the general failure of authors to mention the therapeutic value of blood or its derivatives in cases of extensive uterine hemorrhage and reports two cases in which it has been found of advantage. He also believes that transfusion is often advised when the less heroic measure would prove satisfactory. And in other types of anemias, except those following extensive bleeding it has a wide field of usefulness. In persistent hemorrhage of the multibone he finds it advantageous, and in wasting diseases and infections with grave outlook, it deserves serious consideration. It is unlikely, he says, that the stimulating effects of repeated injections of blood offer more hope in this field than does the more difficult procedure of one or even two transfusions of large amounts of blood.

THE FORUM

TREATMENT OF DRUG ADDICTIONS AND ALCOHOLISM.

A recent issue of the Medical Recorder contains an article by Dr. William K. McLaughlin, the Medical Superintendent of the Hygeia Sanitarium of Chicago, which will be read with pleasure and profit by everyone interested in this important problem, as it seems to be unlawful to furnish morphine habitues with the drug, under existing law. It is important for our doctors to know that there are many good institutions where these cases can be treated and relieved. If you have any cases, we would suggest that you look over the announcements in our advertising columns.

BOOK REVIEWS

A Medical Dictionary for Nurses.—Published by Putnam's Sons, New York. Price \$1.00. This is fairly comprehensive and is an excellent book for its purposes.

Child Training as An Exact Science—By Geo. W. Jacoby, M. D., with full bibliography and thorough index. 384 pages, 15 full-page illustrations. \$1.50 net; by mail, \$1.62. Funk & Wagnalls Company, Publishers, New York.

Heretofore there has been no one book which stood out high above others as a standard scientific, and reliable popular work on the subject of Child Training in its mental, moral and physical aspects.

Dr. Jacoby, a man of high attainments, has written this book for the teacher, the parent, and the physician. With sound logic, he sets forth the reasons why it is necessary that all three of these cooperate in the child's development.

The book is one broad in scope, written out of deep and long experience by a man brilliant in his profession.

The Parent, The Physician, The Teacher, The Nurse, will find this book of immense usefulness. Its Authority and reliability are unquestioned.

Based upon the principles of Modern Psychology, Medicine and Hygiene.

Ankylosis of Elbow.—W. Russell MacAusland, Boston (Journal A. M. A., Jan. 23, 1915), after mentioning the disabling effects of ankylosis of the elbow, gives a rather full review of the literature of the methods that have been employed to cure it. Murphy was the first one to recommend the use of fat and fascia interposed between joint surfaces but MacAusland from his experience thus far believes that there are certain objections to the use of fatty tissue, such as embolus, fatty necrosis from poor circulation and, as happened in two of his own cases, skin necrosis due to the use of the flap of the tissue holding its blood supply.

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EDITORIAL.

THE HUNDRED PER CENT CLUB.

The Council authorizes us to announce the foundation of a Hundred Per Cent Club in the State Association which shall consist of those county societies which have reported as many members in good standing as they had last year. Remembering that there are one hundred and twenty counties in the State, it is of interest to note that the following are charter members of the Hundred Per Cent Club, having as many or more members than last year. It will be noted that those marked with a star have increased their membership over last year. If your county is not in the roll, will you not help your secretary to get it there?

*Adair, *Anderson, Boyle, *Breckinridge, *Bullitt, *Carlisle, *Clark, Clay, *Clinton, *Cumberland, Elliott, *Estill, *Fayette, *Fleming, *Floyd, *Fulton, *Gallatin, *Garrard, *Grant, Green, Hancock, *Harlan, Hickman, *Jessamine, *Knox, *Lawrence, Lee, *Lewis, *Livingston, Lyon, *McCreary, McLean, *Magoffin, Martin, *Mason, *Meade, *Menifee, Mercer, *Metcalf, Morgan, *Nelson, *Nicholas, Oldham, Owen, Owsley, Pendleton, *Perry, *Pike, *Powell, Robertson, *Rockcastle, *Rowan, *Russell, *Scott, *Simpson, *Spencer, *Taylor, *Todd, *Trimble, *Union, Washington, *Whitley.

COUNTY SOCIETIES.

One of the great pleasures that comes to the Editor of the JOURNAL from time to time is to note the increased activity and interest in medical matters in various counties in Kentucky.

Floyd County has just come to the front with ten members. Dr. M. V. Wicker the very effective secretary of this society is trying hard to make it the banner year in its history.

A fine lot of effective physicians have located in Floyd county, and in binding themselves together for the common study of the diseases which afflict mankind, they are following the good examples set in many other counties and we feel sure their work will be of great value to them and to the people they serve.

The Bullitt County Medical Society of which Dr. R. L. Hackworth is secretary, comes to the front again with eighteen members. This is a large membership for this good county, and it is a real pleasure to congratulate the secretary and members on the report.

OUR ADVERTISERS.

Times are hard and business has been bad in many lines. Of course, this has affected the income of the medical men along with every other line of business. People do not get sick any less because of hard times and the doctors' work is not decreased at all, but they are far more apt to put off paying their bills. With this thought in our minds, we can realize the anxiety with which our advertisers are looking over their pay rolls in their business. They are printing this JOURNAL for you. For this reason, it is important that you help them. It is well to remember that every advertiser in the JOURNAL is guaranteed for everything it advertises by the Kentucky State Medical Association. The JOURNAL does not ask you to purchase a single thing from our advertisers unless they can furnish them cheaper and better than anybody else, but we do ask you to give them the opportunity of hearing from you. If you are going to buy something that is advertised, give our advertisers a chance at your business. If somebody else beats them to it, all good and well, but look over the advertising pages today and drop a line to anybody in which you are interested, and then if they cannot sell it to you, it is their fault and not ours or yours. Let us give our advertisers an opportunity to do some business with us.

A HEALTH CAMPAIGN.

The little town of Cloverport in Breckinridge County has had a series of epidemics for the past two years which have awakened its citizens to a realization of the importance of the prevention of disease. Under the inspiring leadership of Rev. W. C. Frank, a health revival has been conducted extending over a series of weeks. Addresses have been delivered by prominent sanitarians, local physicians and interested citizens, daily or twice daily. Special meetings have been held on Sunday devoted to this particular branch of religious work. The citizenship has turned out practically unanimously. Everybody is studying how they can best contribute to the public welfare by promoting their own and their neighbor's health. This has been a remarkable campaign and we congratulate Mr. Frank and the citizens of Cloverport generally on their progressive work and confidently predict for them great returns.

SANITARY INSPECTORS.

The public press has carried the announcement that the members of the State Board of Health will hereafter act as sanitary inspectors for the respective districts in which they live. This is a splendid plan and will enable the members of the Board to come in a sort of contact with the health problems and with the profession and people that will enable them to give more definite instructions and make the rules and regulations more generally applicable in the prevention of diseases. Far more than this, it will help to foster that public sentiment which is already developing so rapidly for the prevention of disease. We congratulate the State Board of Health on this advanced step.

INTENSIVE HEALTH CAMPAIGNS.

It is announced that the State Board of Health in co-operation with the International Health Commission will be able to conduct intensive health campaigns in a dozen or more counties during the coming summer and fall. Naturally, these campaigns will be conducted first in the counties which show the heaviest hookworm infection. The members of the Board express considerable regret that they will not be able to conduct campaigns in those counties which have previously had the benefit of them. Many of these are clamoring for second campaigns, but limited funds will not enable the Board to conduct them. We are sure we can bespeak for the medical conductors of these campaigns the hearty co-operation of the physicians of the various counties which will be interested.

THE SEPTEMBER MEETING.

In this issue we print a very preliminary subject-program of the September meeting of the Kentucky State Medical Association. We would suggest that members interested in the program write to Dr. J. W. Kincaid at Catlettsburg, immediately, especially if they are willing to prepare papers along the lines indicated in this subject-program. A warrant of the success of the Louisville Meeting is contained in the statement that the Committee of Arrangements representing the Jefferson County Medical Society has just been appointed. It consists of Drs. Charles W. Hobbitt, Chairman, Lee Kahn, E. L. Henderson, R. Lindsay Ireland, Virgil E. Simpson and Charles G. Lueas.

Complete announcement for the meeting will be made in the next issue and in the meantime, we want to ask every interested physician to cooperate with us in securing the best program we have ever presented.

PRESCRIBING SPECIALTIES.

It is with considerable pleasure that we give the following letter to our readers, from Prof. W. A. Puckner, the very distinguished Secretary of the Council on Pharmacy and Chemistry of the American Medical Association. We hope every reader of the *J*Z8&...* will read this over twice and think seriously what it means. The letter is to the point and is fully self-explanatory.

"I have received your letter of April 15th, the price list of the Chemical Company, and am looking forward with interest to the submission of the firm's 'specialties.'

"The tendency of firms of this sort to market shotgun mixtures of well-known drugs under non-descriptive names and with misleading claims appears well-nigh universal. I wish we could have some legislation making it a penitentiary offense for a physician to prescribe a mixture the composition of which he does not know at the time that he writes his prescription. Under these conditions, I am sure that few physicians would prescribe 'Chillitone.' When treating malaria they would give a dose of quinine instead. I am sure that they would not prescribe 'Analgesol.' They would take no stock in the claim that acetanilid in the form of 'Analgesol' is 'A Nondepressant Liquid Antipyretic and Analgesic,' but would prescribe acetanilid when they want it and with due precautions. Similar arguments could be made for almost every one of the 'specialties' which are contained in the price list of almost every firm in the country. It is rather discouraging, is it not? And the worst of it is that the public pays a fee to the man who takes his prescrip-

tion hints from manufacturers who in their turn take their hints from the Lord knows whom. Is it any wonder that the public feels competent to treat its maladies all the way from dyspepsia to tuberculosis?"

It is important for us to remember that the medical profession is responsible for the use and abuse of patent medicine and self-medication. If you are prescribing drugs of which you do not know the composition, you are participating in the distribution of these things. It is a question with every doctor as to whether he intends to be a vender of patent or proprietary medicines, or a real physician.

THE BAKING POWDER PROBLEM.

Upon this important subject the *Indiana Medical Journal* says:

For a number of years there has been much discussion with regard to the effects of baking powders on the health. While minor objections have been urged against all baking powders, the principal charge of unwholesomeness has been made against baking powders containing alum. This objection is based primarily on the injurious effects of large quantities of aluminum salts. To this objection the answer has been made that the process of decomposition which liberates the leavening gas when alum baking powder is used, produces an oxid of aluminum which is insoluble, and hence not injurious. For the facts in this matter to be fully understood, it must be remembered that the so-called alum now used in baking powder is not the alum used in medicine, being a sodium alum (sodium aluminum sulphate) instead of the official potassium salts. This point is held by some to be important in view of the effects of potassium salts on the system. Cream of tartar is a potassium salt, being potassium acid tartrate.

In the discussion of the baking-powder question, it must be remembered that the practical application of the facts concerns only small amounts of these salts and contemplates an occasional and not a constant use. Few people habitually consume breads made from baking powder, hence the amount of potassium introduced into the system by baking powder is unlikely to be of serious moment as regards health. Potassium salts are frequently taken as constituents of vegetable food, and yet there is no evidence that they disturb metabolism in any way. The question whether alum used in this way is injurious has been settled by the investigations of the Referee Board of Scientific Experts appointed by President Roosevelt, and its decision may be considered as coming from the court of highest authority. The investigation

of this board covered a period of several years and was the most extensive single investigation ever conducted as to the healthfulness of alum baking powders. The distinguished character and personnel of the board itself lends additional weight to its findings. The board consisted of the following men:

Dr. Ira Remsen, president of Johns Hopkins University.

Dr. Russell H. Crittenden, professor of physiological chemistry, Yale University, and director of the Sheffield Scientific School.

Dr. John H. Long, professor of chemistry in the Northwestern University Medical School.

Dr. Alonzo E. Taylor, professor of physiological chemistry, University of Pennsylvania.

Dr. Theobald Smith, professor of comparative pathology, Harvard University.

The board made the following findings:

"Aluminum compounds when used in the form of baking powders in foods have not been found to affect injuriously the nutritive value of such foods.

"Aluminum compounds when added to foods in the form of baking powders, in small quantities, have not been found to contribute any poisonous or other deleterious effect which may render the said food injurious to health. The same holds true for the amount of aluminum which may be included in the ordinary consumption of aluminum baking powders furnishing up to 150 mg. (2.31 grains) of aluminum daily.

"Aluminum compounds when added to foods in the form of baking powders, in large quantities up to 200 mg. (3.09 grains) or more per day, may provoke mild catharsis.

"Very large quantities of aluminum taken with foods in the form of baking powders usually provoke catharsis. This action of aluminum baking powders is due to the sodium sulphate which results from the reaction.

"The aluminum itself has not been found to be thereby reduced, lowered or injuriously affected."

In short, the board concludes that alum baking powders are no more harmful than any other baking powders, but that it is wise to be moderate in the use of foods that are leavened with baking powder.

In Dr. Taylor's conclusions, a different aspect of the baking-powder question is brought out. It is shown that the product of all forms of baking powders is laxative, and the suggestion is made that the laxative effects of the continuous use of breads made with baking powder may be injurious. The objection applied to the cream of tartar baking powder which leaves a residue of Rochelle salts, to the phosphate baking powders which leave the phosphate of sodium and

to the alum baking powders which also leave the sodium sulphate. Dr. Taylor says: "Apparently, therefore, at present at least, the use of baking powder is associated with the introduction into the alimentary tract of a certain amount of saline cathartic, the salt differing with the use of a particular type of baking powder." In connection with this objection, the amount of soluble residue left by the baking powder becomes of importance.

Here, again, the pertinence of the objection depends on the quantity likely to be eaten. In no case is it likely that a person would consume bread or biscuits enough to get an appreciable effect on the bowels from the laxative produced.

The criticisms with reference to the action of baking powders indicate a tendency to magnify quite incidental matters whenever they seem to favor the interest of one or other manufacturer. Thus the tartrate was at one time highly regarded because it was a product which was destroyed in the system, leaving a natural constituent of the body, that is, potassium carbonate. More recently it has been discovered that the tartrates are only partially metabolized in the system, removing the supposed advantage of the tartrate powders. On the other hand, there is a disposition to emphasize experiments tending to show the power of tartrates to affect the kidneys injuriously, although there is no evidence that such an injurious action can occur from the small quantity present in baking powders. While the objections to alum are unjustified, the physician will do well to inquire carefully into the probability of any alleged injury occurring from other forms of baking powder.

Malaria and the Puerperium.—After noticing the facts in regard to the relations of malaria and the puerperal condition, as noticed by physicians in the tropics and elsewhere, M. J. Seifert, Chicago (*Journal A. M. A.*, December 19, 1914), reports the case of a woman, aged 25, who had never lived in a strictly malarial region, or suspected malarial infection, who suffered from irregular chills and fever in two consecutive confinements, and never at any other time, with no pelvic involvement and with positive microscopic findings of the tertian parasite in her second confinement, which, he says, is worthy of attention. She had also suffered from chronic nephritis, and malaria was only diagnosed or sought for in the diagnosis, until almost every other possible disease had been excluded. The most important part of this paper, as he says, is the lesson to be learned in regard to the need of thoroughness of diagnosis.

SCIENTIFIC EDITORIALS.

ECZEMATOID RINGWORM.

If we look at this disease superficially and carelessly we are liable to mistake it for a case of eczema. Then we would treat this disease with remedies recommended for eczema and wonder why we did not get results. Had we not been too hasty, had we observed its peculiar location and form, had we made a microscopical examination of the scales, and, if necessary, of some of the deeper tissues, we would have found that this disease belongs to the fungus variety.

In 1860, Hebra described an eczematoïd trichophytosis in the inguinal region and called it eczema marginatum, and added that in rare cases the axilla, umbilicus and folds of the breast were involved.

Dry, scaly and pus-forming varieties of trichophytosis have long been known to occur on the extremities, but eczematoïd varieties on the palms and soles were first demonstrated by Djeladeddin-Mouekhlar in 1892, and afterwards again described by Whitfield and Sabouraud in 1911.

Clinical manifestations of eczematoïd trichophytosis in the groins appear as flat reddish papules which sometimes coalesce and become inflammatory, particularly when favored by heat and moisture. Soon infiltrated round patches make their appearance on other parts of the body, such as the axilla, arms and even the vagina. Pruritus is rather increased by heat, as when the patient is in bed, and often leads to secondary infection, such as impetigo and furunculosis.

Eczematoïd trichophytosis was known long ago in tropical and sub-tropical countries, especially in India. There it was known under the name of Dhobi's itch (laundry-man's itch); the disease is usually met on the extremities in persons whose occupation is laundry work. Soldiers who have done service in India, China, Cuba, Porto Rico and South Africa often bring the disease with them when they return to their native lands. It is rather peculiar that the disease is found among men more than women, probably due to the greater exposure of the men in working in the fields and jungle.

In regard to transmissibility of the disease, predisposition towards it seems to play a dominant factor. In India it is thought that the disease is transmitted by laundrymen whose hands are affected by the immersion and who are supposed to transmit the virus to their patrons through the clothing. Then it may be transmitted by wearing infected clothes or direct bodily contact, wherefore Turkish baths, gymnasiums and swimming

pools are often responsible for the transmission of it.

The diagnosis of eozematoid trichophytosis is based upon its unusual location, its peculiar form and persistence and its repeated inflammatory attacks at times penetrating the cellular tissue (scrotum, labia and pudenda). From erythrasma it can be distinguished by its eozematoid character; at times it may come simultaneously with it. In infection of the sole of the foot the diagnosis may be masked by dysidrosis, but it can be soon found and established by examining the scales in which mycelia and spores are found in great numbers. Sabouraud distinguished this disease from other forms of trichophytosis and called it epidermaphyton inguinale.

No therapy should be applied until microscopical examination is made. Flannel dipped in tincture of green soap and hot water should be rubbed over the scaly places, then antiseptic solutions containing bichloride of mercury, resorcin, beta-naphthol should be used. The strength of this solution must be measured according to the severity of the disease. If too much irritation is caused by these applications some emolient salves, such as zinc oxide, are very grateful. Bullous places and pustules must be opened and cleaned. The treatment must be kept up until every sight of the disease has disappeared.

M. L. RAVITCH.

Cleft Palate.—L. Emerson, Orange, N. J. (Journal A. M. A., Jan. 23, 1915), details the technic used by him, as well as that of the Brophy operation, as described by Carmody. The Brophy operation, he says, should be performed in early infancy before the end of the third month, and Brophy himself operates as early as the second or third week. The mortality in the early months of life, in the hands of the occasional operator has led him to abandon the early operation altogether. If complicated by hairlip, he usually repairs the lip during the first few months, and closes the palate some time in the second year. The parents of a child with a cleft palate should be told that unless it is remedied within the first five years of life, his power of speech will be seriously and permanently impaired. While he says it is not entirely original, Emerson's own method is to remove a wedge-shaped piece, base down, subperiosteally from the septum, thus avoiding injury to the nerves and blood-vessels; the space from which this is removed is obliterated by forcing back the premaxilla, leaving a septum smooth on both sides. It is necessary to freshen the edges of the premaxilla, and also the maxilla, in the same way as in the case of a single cleft. The technic is described at length, and the method illustrated. The after-care of the case is important.

OFFICIAL ANNOUNCEMENTS

KENTUCKY STATE MEDICAL ASSOCIATION PRELIMINARY SUBJECT-PROGRAM.

ANNUAL SESSION, LOUISVILLE, KENTUCKY, SEPTEMBER 21, 22 AND 23, 1915.

- I. Symposium on Cardio-Renal Disease.
 1. Heart Block.
 2. Heart Complications in Infectious Diseases.
- II. Diagnosis and Treatment of Gastric and Duodenal Ulcer.
 1. Medical.
 2. Surgical.
- III. Epilepsy.
- IV. Acidosis.
- V. Symposium on Pneumonia.
- VI. Diabetic Coma.
- VII. Demonstration of the Auscultatory Method in Blood Pressure.
- VIII. Digitalis—Its Indications and Manner of Use.
- IX. Uses of Iodine and the Iodides in Medicine.
- X. Therapeutic Measures Other than Drugs.
- XI. Present Day Methods in Ophthalmology of Essential Advantage to the General Practitioner.
- XII. Diseased Tonsils—What Shall We Do With Them?
- XIII. Accessory Sinusitis.
- XIV. Trachoma—Importance of Its Early Recognition.
- XV. Goitre.
- XVI. Anaesthesia.
- XVII. Symposium on Modern Medical Tendencies.
 1. Surgical Radicalism.
 2. Surgical Conservatism.
 3. Public Medical Instruction.
 4. Mental Healing.
 5. State and Cooperative Medicine.
- XVIII. Importance of Early Recognition of Cancer of the Rectum.
- XIX. Chronic Prostatitis.
- XX. Fractures.
- XXI. School Sanitation.
- XXII. Life Insurance.
- XXIII. Common Sense in Dermatology.
- XXIV. Narcotics and Stimulants.
- XXV. Focal Infections.
- XXVI. Verumontanum; with Special Reference to Referred Symptoms.
- XXVII. Diagnostic Points of Interest to the General Practitioner in Diseases of the Rectum.
- XXVIII. Demonstration of Problems in Obstetrics.
- XXIX. Medico-Legal Paper.
- XXX. Rabies.

ORIGINAL ARTICLES

FURTHER RESULTS WITH THE USE OF SALVARSANIZED SERUM.*

By H. J. FARBACH, Louisville.

Some months ago I read before this society a preliminary report of some cases of cerebro-spinal lues treated with salvarsanized serum. I wish to report further on these cases, and on some additional ones.

The technic used was the Swift-Ellis. I mentioned in my first report the other two procedures suggested, namely: That of a mixture of blood serum and salvarsan solution; and the hypertonic neosalvarsan solution.

I wish to reiterate and with more emphasis that these methods should not be attempted. Theoretically they are not rational and present reports show them not only to be without therapeutic benefit but to give rise to serious harmful and even fatal results.

I wish to again call attention to the fact that absolute asepsis must be observed in every step of the obtaining and preparation of the serum and that it must be absolutely red cell and haemoglobin free. That a serum showing red cells or haemoglobin should never be used even if the color did disappear during the heating of the serum.

In all the cases, to be reported, systemic medication failed to relieve or to reduce the symptoms present.

It has been my experience that many cases of cerebro-spinal lues with positive spinal fluid findings can be relieved with systemic medication and without intradural medication. Therefore systemic medication should always be tried first. Every spinal fluid with positive findings is not an indication for intraspinal treatment.

Resort should be made to the method, only, when the others fail. But, the treatment should not be postponed after thorough systemic treatment fails to produce results.

Destroyed tissue in the cerebro-spinal system as in every other vital organ, can not be replaced. When the symptoms present are those produced by nerve cell destruction we can not hope to relieve them. Our effort would be to prevent further progress and to improve the patient's general health and welfare.

The grounds upon which this treatment is based are mainly that the cerebro-spinal fluid is a secretion. It is not an exudate or a transudate. It does not gain entrance to the spinal canal by an osmotic or filtration process. It is the product of the activity of the cells of the choroid plexus. These cells allow few if

any of the antisyphilitic substance found in the blood current to enter into its secretion. The man that argues that if such substances are present in the blood stream they must also be present in the spinal fluid because the blood goes to every portion of the body, forgets that this fluid that bathes the brain and cord is a secretion as the gastric or pancreatic juices are a secretion.

Briefly, the conditions produced in the cerebro-spinal system by the *treponema pallida* are:

1. Inflammatory reaction in the meninges.
2. Gummatous conditions.
3. Artery changes; and the blood vessels than concern us most are those in the pia-mater.

These are not all the changes that can and do take place but they are the ones that interest us most from the present discussion.

When we can not bring antisyphilitic substances to bear on these conditions through systemic medication, through the general circulation, as evidenced by failure of such medication to relieve symptoms, we now have recourse to this new method.

I will report these cases briefly:

Case I. Tabes, paralytic stage. General condition bad. Suffers great deal of pain. Involuntary action of bowels and bladder. Blood shows Wassermann two plus. Cerebro-spinal fluid shows Wassermann three plus; globulin three plus; cells 172.

Intra-spinal treatment given every two weeks. Was given eight treatments. Two weeks after last one of this series cerebro-spinal fluid shows Wassermann negative; globulin, negative; cells, three. General condition greatly improved, gained twenty pounds, pains not so frequent and of little severity. Has regained sufficient control over bowels and bladder to keep bed clean during the day. Six months later; condition about the same as last reported. Little more pain. Another treatment given. Cerebro-spinal fluid obtained at this puncture showed, Wassermann one plus; globulin two plus; cells twenty.

Case II. Beginning tabes. Lightning pains, trouble in walking at night and in washing face. Knee reflexes practically gone, pupils fixed. Girdle sensation. Lost forty pounds in past year.

Blood serum shows Wassermann two plus. Cerebro-spinal fluid shows Wassermann two plus; globulin three plus; cells eighty.

Was given six treatments. Last puncture shows cerebro-spinal fluid, Wassermann, one plus; globulin, negative; cells, eight. General condition: Gained twenty-two pounds, pains and girdle sensation gone, feels strong, still some unsteadiness in gait.

Case III. Beginning tabes. Fixed and un-

*Read before the Jefferson County Medical Society.

equal pupils, knee jerk very sluggish, gait slow and unsteady. Afraid to attempt to walk downstairs, speech hesitating, and omisive. Mentality slow, general condition good. Blood shows Wassermann two plus. Cerebro-spinal fluid shows, Wassermann three plus; globulin, three plus; cells two hundred and forty. Ten treatments given. Cerebro-spinal fluid after the last one showed, Wassermann, one plus; globulin negative; cells 2. Gait better, can walk downstairs, mentality and speech greatly improved, pupils react very slightly and are still unequal.

Case IV. Beginning paresis. Mental symptoms tremor, bladder disturbance. Blood shows Wassermann one plus. Cerebro-spinal fluid showed, Wassermann, two plus; globulin, two plus; cells, fifty-six. Patient received five treatments. Last spinal fluid showed Wassermann doubtful; globulin, one plus; cells, none. General symptoms practically all disappeared and patient discontinued treatment. Five months later, symptoms returning, cerebro-spinal fluid shows Wassermann, one plus; globulin, two plus; cells, eleven. Resumed treatment symptoms again disappearing.

Case V. Paresis of slow progress for three years. Has had two maniacal attacks. Had been under heavy systemic medication. Blood serum negative to Wassermann. Cerebro-spinal fluid showed, Wassermann, negative; globulin, negative; cells, sixty-two. Patient had received five treatments. Cerebro-spinal fluid after last one showed Wassermann, negative; globulin, one plus; cells, twenty. Feels better and personally claims great improvement. There is little clinical evidence to substantiate the patient's claims.

Case VI. Locomotor ataxia for fifteen years. Chief indication for treatment was pain, especially in the legs. Blood showed Wassermann, one plus. Cerebro-spinal fluid doubtful; cells, thirty. Patient received four treatments. After last one cerebro-spinal fluid showed, Wassermann, two plus; globulin, fluid showed, Wassermann, one plus; globulin, one plus; cells, four. Patient gained twelve pounds, eats and sleeps better, pains not so frequent or severe.

Case VII. Cord guma. When seen had complete paralysis of bowels, bladder and both legs. This condition developed within ten days of onset. Denied syphilitic history but blood showed Wassermann two plus positive. Systemic medication failed to relieve or even retard the progress of the condition. Cerebro-spinal fluid showed, Wassermann, doubtful; globulin, three plus; cells, 280. After the first treatment the symptoms disappeared rapidly and within a few days he was back at his office, doing his regular duties.

He received two subsequent treatments and has never had any trouble since. Cerebro-spinal fluid at last examination, which was after last treatment, showed, Wassermann, doubtful; globulin, doubtful; cells, fifteen. Patient to-day is enjoying as good health as he ever did. He still is taking systemic medication.

Case VIII. Beginning tabes, rapid in advance. Lost thirty pounds gait very bad, girdle and lightning pains, reflexes gone, pupils fixed. Bladder disturbance. Blood negative to Wassermann. Cerebro-spinal fluid showed, Wassermann, two plus; globulin, two plus; cells, 44. Patient had received six treatments and is still taking treatment. Cerebro-spinal fluid after last treatment showed, Wassermann, one plus; globulin, negative; cells, six. Patient is now able to walk and do some little work. Pupils fairly active, girdle and lightning pains felt only seldom and then are not severe. Still wets the bed occasionally.

Case IX. Beginning tabes. Reflexes gone, fixed pupils, girdle and lightning pains, gait bad, complete incontinence of urine. Unable to do any work. Blood showed, Wassermann, two plus. Cerebro-spinal fluid showed, Wassermann, three plus; globulin, three plus; cells, 123. Patient had four treatments. Cerebro-spinal fluid after last one showed, Wassermann, one plus; globulin, one plus; cells, ten. Outside of a material gain in weight, 25 pounds, and some improvement in bladder symptoms, this patient showed no improvement.

Case X. Hemiplegia with complete blindness. Systemic medication failed to relieve. Blood showed, Wassermann, two plus. Cerebro-spinal fluid showed Wassermann, three plus; globulin, three plus; cells, 194. Patient received six treatments. Cerebro-spinal fluid after last one showed, Wassermann, one plus; globulin, negative; cells, two. General condition, sight resored, can read and do fancy sewing. Hemiplegia gone except for a feeling of weakness in that side. This patient developed a Bells palsy after second treatment that disappeared after the third one.

Case XI. Epileptoid convulsions, occurring with no regularity. Blood showed, Wassermann, three plus. Systemic medication reduced convulsions for a time but they returned with greater severity. Cerebro-spinal fluid showed Wassermann, three plus; globulin, three plus; cells, 98; Patient received four treatments and has had no convulsion since the first treatment. Cerebro-spinal fluid after last one showed Wassermann, one plus; globulin, negative; cells, none.

In none of these was any harm done by the intraspinal treatment. In those whose clinical symptoms were improved little if any,

there was an improvement in the general health.

In the treatment of these cases do not discard the old, time-proven beneficial procedures. Rather use the newer methods in conjunction with these. Remember you are treating syphilis and that mercury, the iodides, iron, cod-liver oil and reconstitutives are not relegated to the junk heap by a lumbar puncture. Cases in every form were beneficial and cured long before salvarsan, neo-salvarsan or salvarsanized serum were heard of. We are not trying to replace the old treatment we are trying to improve it.

The great field, however, is in prophylaxis. Lumbar punctures has taught us one big thing, the early diagnosis of nerve syphilis. We now know that nerve involvement can and does occur early in luetic infections and no patient of known or suspected syphilis should be discharged as cured without first ascertaining the condition of the cerebro-spinal fluid.

Too, in cases of early syphilis, where headache, neuritis and other nerve symptoms are persistent, lumbar puncture should be made and treatment governed by these findings.

The day is past when a doctor is justified in treating a suspicious sore on the expectant plan, without resorting to the dark stage of India ink stain. Waiting for the secondaries can no longer be considered watchfully waiting, it is neglect.

A doctor to-day, too, must be considered neglectful who does not advise and impress upon his luetic patients, before discharging them, the necessity of a lumbar puncture.

DISCUSSION:

R. Hayes Davis: I have very much enjoyed Dr. Farbach's report. The excellent results he reports correspond with the results that have been obtained by most observers who have used this plan of treatment. In the vast majority of cases it stays the progress of the disease; the symptoms are arrested, and sooner or later the spinal fluid becomes negative.

One point that I particularly wish to emphasize is the importance of employing systemic treatment before subjecting the patient to the intraspinal treatment. This is very important, because many of these cases will respond to systemic treatment when carried out in the proper manner. By systemic treatment in the usual sense of the term, is meant the administration of mercury with an occasional dose of salvarsan. This will not suffice in cerebro-spinal cases; it is necessary to keep the patient constantly saturated with salvarsan, given at intervals of two weeks, over a long period of time—say from six to ten injections. Most patients can stand this, but if they begin to manifest evidence of an accumulation of arsenic, it is, of course, advisable to

lengthen the intervals between injections. If, after the patient has received from six to ten injections, followed by mercury given hypodermatically or by innunction over a period of several weeks, the spinal fluid still gives a positive reaction, then go back to the salvarsan followed again by mercury, and if this be kept up a sufficient length of time, I believe the majority of cases will finally respond without the necessity of resorting to the intraspinal treatment. In a recent number of the American Journal of the Medical Sciences, there appeared an article by Dr. Sachs, of New York, in which he cited a number of cases treated in this manner. He made a very exhaustive study of these cases, even to the extent of ascertaining chemically the percentage of arsenic present in the spinal fluid, and he found, contrary to the general belief, that the spinal fluid contained just as much arsenic as is present in the serum which we administer to these patients. If this is true, and his experience is corroborated by that of others, as well as the cases I have treated myself, then I think it is advisable, in every case, to give this method of treatment a fair trial before resorting to the more dangerous intraspinal injections of salvarsanized serum. We know, of course, that with perfect technique intraspinal injections can be carried out with practically no danger to the patient, but it is infinitely more simple to make an injection into the vein than to inject the spinal canal. Lumbar puncture is certainly more dangerous than simple intravenous injection, and if we can get practically the same results from the latter method, then I think we should give these patients the benefit of it.

Herbert Bronner: I believe Dr. Farbach has given us a very fair and conservative statement of the results of this method of treatment. Probably all of us who have carried out this plan of treatment have observed decided improvement in the general condition of the patients.

As Dr. Farbach has pointed out, in some cases there is considerable clinical improvement, while in many others, even though the spinal fluid becomes decidedly negative, very little improvement in the clinical symptoms is noted. We have had a number of cases in which the laboratory goal was reached, as evidenced by a negative Wassermann and a negative cell count, but with practically no improvement in the clinical symptoms. It may be argued that in these cases the symptoms are due to the damage that has already been done, and that the only thing accomplished by the treatment is the arrest of the process, but from the patient's point of view that does not mean very much.

Probably most of us have read the article by Dr. Sachs, which Dr. Davis referred to, and in this connection it may be that the work of Dr. Oglesby is worthy of consideration. His method is to withdraw a quantity of the cerebro-spinal

fluid and then inject small doses of salvarsan directly into the cord.

Geo. H. Day: The main factor in dealing with conditions of the brain and cord, such as described by Dr. Farbach, is to make an early diagnosis. If we can begin the treatment of these conditions before destruction of tissue occurs, we can naturally hope for better results than could be obtained later. Therefore, in every suspected case, we should make a puncture of the spinal cord and examine the fluid.

I have hesitated to use Oglesby's method of introducing salvarsan into the spinal fluid. I believe that the method of Swift and Ellis is the one of choice. Just why the introduction of salvarsanized serum is superior to the salvarsan itself, I am unable to say; it may be that its effect is not wholly due to the arsenic. Personally it has always been my opinion that it is the combination of arsenic with haemoglobin that produces results in salvarsan therapy. The main thing is to make the diagnosis of cerebral syphilis early and treat it promptly, and this will secure the best results.

W. E. Gardner: Dr. Farbach's report is of interest to all of us and I wish to congratulate him upon the results obtained.

I have been very much interested in the use of salvarsan in the treatment of syphilis of the brain and spinal cord. It seems that nothing is accomplished in such conditions by the intramuscular or intravenous injection of salvarsan. It has been shown by experimentation that fluids do not pass from the blood stream into the spinal cord, while, on the other hand, they do pass from the cerebrospinal fluid into the blood-stream. Therefore, it would appear that, to bring the salvarsan into direct contact with the treponema, it must be introduced into the cerebrospinal fluid. Of the methods for accomplishing this, that of Swift and Ellis seems to be the most popular, but I have been very much interested in the method employed by Oglesby, of the Neurological Institute of New York, mentioned by Dr. Bronner. Under this method, the cerebrospinal fluid is withdrawn and definite but small doses of salvarsan are injected into the canal at intervals of ten days or two weeks, until eight or ten injections have been given.

So far as paresis is concerned, I have seen no reports which would indicate that this condition is benefitted by salvarsan in any form, but I have read a great many reports of cases in which no serious organic change has taken place, which were greatly benefitted.

Leon L. Solomon: I would be the last to say a word in opposition to a scientific therapeutic measure, such as the one which has been so ably advocated by Dr. Farbach to-night, but the impressions I have gained is that the best that has been accomplished by this method has been to improve the general status of the patient without materially affecting the clinical manifestations

that are so distressing to patients of the type referred to in the report. This was true in practically all of the eleven cases reported. One thing that particularly impressed me is that we are warned not to entirely forego the old and tried treatment.

The use of the word "cure" in connection with these conditions, is still, as it has always been, very ill-advised. We were formerly taught that, after a course of treatment extending over a period of three years, we were justified in pronouncing a syphilitic patient cured. Then salvarsan was heralded to the world and it came from a man whom the medical profession had learned to respect, and who, up to that time, had made no blunders. We were led to believe that salvarsan was the last word in syphilis. Then came neo-salvarsan, and finally, at the present time, salvarsanized serum, after the method of Swift and Ellis, or its modifications. In a conversation with a gentleman who practiced medicine in Hot Springs, Ark., recently, he reiterated a statement he made to me two years previously; that syphilitic patients were still coming in abundance to Hot Springs, to obtain the benefit of the baths and the use of mercury and iodine. I cannot get away from the belief that we have not yet found a therapeutic measure that is superior, in its final results, to the use of mercury and iodine. Furthermore, it is questionable, in my mind, whether the time will ever come when we can truly say that a man who has contracted syphilis has been cured, and that it will be impossible for him to have a reinfection, or that he will remain thereafter entirely free from any manifestations of the disease originally acquired.

C. W. Jefferson: I have very greatly enjoyed Dr. Farbach's report. I have used this method in sixteen cases, and I cannot help but feel that anything that will make a smoky, cloudy cerebrospinal fluid perfectly clear, even eliminating any pus that may be present, and change the Wassermann reaction from 3 plus to negative, is a decided step forward in treatment of these conditions. In a number of cases that have come under my observation, the blood would give an absolutely negative Wassermann reaction, while the spinal fluid would show a two or three plus. To my mind this shows that, while syphilis has been practically eliminated from the blood, it is still present in the cerebrospinal fluid, and in such cases it has been demonstrated that five to eight injections of salvarsanized serum into the cord is sufficient to bring about a negative Wassermann reaction of the cerebrospinal fluid. Furthermore, in such cases, neither the use of mercury nor the injection of salvarsan intravenously or intramuscularly has any effect upon the spinal fluid. Therefore, I cannot help but believe that intraspinal treatment should be carried out in these cases in conjunction with mercury and salvarsan.

H. J. Farbach, (Closing): I read the article by Dr. Sachs, of New York, in which he reported

results obtained by Dr. Benedict of Cornell, and I have carried out his technique, estimating the amount of arsenic that we get in a dose of salvarsanized serum that is injected into the cord. Also I have withdrawn the cerebrospinal fluid on the day following the intravenous injections of salvarsan and testing it for the presence or absence of arsenic I have never been able to find any but the merest trace of arsenic.

One of the speakers stated that this method of treatment produces laboratory improvement without benefitting the clinical manifestations. In the cases reported to-night, only two who had received as many as ten injections showed a negative Wasserman of the cerebrospinal fluid; the globulin and cells clear up but the Wasserman hangs on, and a positive Wasserman means an active syphilitic process. Furthermore, we are benefitting these patients clinically. Cases of locomotor ataxia have been enabled to resume work; cases of gummata of the cord who were absolutely paralyzed and upon whom systemic medication had no effect, have been put back on their feet.

It is not the amount of arsenic in the salvarsanized serum that is doing the work; it is something else besides the arsenic in the blood serum. Investigation has shown that salvarsan in the most minute doses may produce meningitis, with local symptoms of greater or less degree, depending upon the extent of the meningitis when it is introduced directly into the cord.

The amount of improvement in the clinical manifestations depend upon the extent of the lesion when treatment is begun. In paresis we can expect but little. The micro-organism has gotten in between the nerve cells and set up a low grade process which interferes with the nutrition of the cells, and we have nothing that will go down between or into these nerve cells and get it; we can benefit only the cells reached by the cerebrospinal fluid. Consequently, it cannot be claimed that this method is a positive cure for all syphilis of the cerebro-spinal axis.

Breakage of Electrode.—T. J. Kinnear, Springfield, Ill., (Jour. A. M. A., Jan. 23, 1915), relates an experience with a vacuum electrode, which he was urged to purchase by a traveling salesman, and which he had objected to on account of the possibility of dangerous results from its breakage. He finally seeing a case in which it would be of value if safe, ventured to use it, and in one of his treatments the tube snapped, giving a great deal of trouble to extricate it, as well as suffering to the patient, who, however, recovered promptly without any serious consequences from the effects of the accident. He keeps the instrument in view as a warning to avoid the use of anything but perfectly safe instruments in the urethra.

A NEW DIAGNOSTIC METHOD.*

By CURRAN POPE, Louisville.

In corpulent people or those whose tissues are very firm, we find that the shadow-image cast upon the fluorescent screen is poor, lacking in contrast, that the image is of a darkish-grey or a greyish background and that it requires an expert and experienced fluoroscopist to see the details, particularly if he works, as he should, with a specially pumped tube, whose rays are very hard and limits his milliamperage from one-half to two. I always employ a filter because it is a complete protection to the patient, although it neither improves nor mars the image, because it allows us to employ rays of great intensity and thus obtain a much more visible image on the screen. My tubes for fluoroscopic work are specially pumped and tested by the maker on the transformer I employ and are *never* used for any other than fluoroscopic work. This I believe insures a more uniform working condition. The workings of the tube is controlled by a floor or foot push and of course no examination is made save in a light-proof room.

As Holzknecht¹ has truly said, the fluoroscopic image under these conditions, with hard rays does not suffer from obscurity of the background. It is usually light enough, but the details, accumulation of food, foreign bodies and the like are curiously light in tone. The image is clear but lacks contrast. Why does it fog?

The true cause of the fogging of his image will be found in the interference of the secondary, that is the endogenous secondary rays which have their origin in the region traversed by the primary rays. These endogenous secondary rays increase greatly in quantity as the primary X-rays increase in hardness.

The secondary rays take their origin in every part of the region under examination, they are propagated in all directions, cross and intercross, in the body and finally impinge on the screen just where it should be darkest, lighting up the shadows and fogging the picture almost to invisibility." In June 1913 Dr. George Bucky², of Berlin, first made use of a grating diagram to cut off the secondary rays issuing from the object under examination. The grating diaphragm was placed between the screen and the surface of the body. The object was seen through a trellis of wires. The secondary rays crossing and recrossing were arrested by the walls of the grating and are not allowed to fall on the fluorescent screen, giving a very clear and

*Read before the Jefferson County Medical Society.

well defined image. Holz knecht¹ proposed to use a small tubular compressor diaphragm, which he called the "Bucky Compressor Diaphragm," and which in his original article he describes as a simple narrow cylindrical tube lined with lead, which he attached to his fluorescent screen as is shown in the drawing No. 1. With this compressor we may employ the hardest rays, without fear of fogging, and thereby obtain clear image with richer contrast. We prefer the hardest rays since the harder the rays the clearer the image and the greater the contrast. In radioscopic work we do not need a general view of the whole region. A clear view of a limited region at a time and especially a region under suspicion, can be obtained and the compressor diaphragm moved from place to place over the entire region under examination. Prior to my use of the cylinder I used a 4x5 screen in lead cloth as suggested by Quinby. In using the cylinder the increased distance between the object and the screen will cause some magnification of the radioscopic image, which is rather an advantage. By pressure with the cylinder we can depress or compress the parts under examination and obtain a still clearer image. Holz knecht and Robinson described this in 1906 and the principle has been in practical use ever since in radiographic work. Under the compressor the appearance is striking as we obtain black and white images, clearly visible and rich in detail. "The new diaphragm greatly extends the limits of the visible perception, for it is obviously the smaller objects which are most obscured by the fogging from secondary rays. He has observed foreign bodies in the skull, eye, objects accidentally swallowed, needles in the trunk, specks in the pelvis and concretions in the prostate." "The X-ray examination for biliary calculus has almost been abandoned owing to the fact that such stones seldom contain sufficient calcium salts to make them visible. By this means, however, they can be rapidly and certainly detected on the screen. The radioscopic image of the bones, hitherto very ill defined with hard rays and completely lacking in detail if the rays were soft, can now be obtained with great clearness and detail. The Bucky diaphragm should always be used in the correct position, that is, so adjusted with relation to the beam of rays that the shadow of the diaphragm is a perfect circle. * * * We must have an intense beam of hard rays, 8 to 9 Bauer with 2 1-2 milliamperes through the tube."

With only Holz knecht's¹ description, I began to experiment with a cylinder and after considerable work designed the instrument I present herewith to-night, together with some improvements that I think worthy of note

and consideration. It will be observed that the fluoroscopic cylinder, called by Holz knecht, "Buckby's Pressure Cylinder" consists essentially of a cylinder of wood (a) lined with lead, (b) removable from the frame and attached to same by the clamps, (c) superimposed upon this cylinder is a square wooden frame, (d) with a circular opening, (e) of the same diameter as the cylinder. This frame is divided into two compartments (f and g) containing a compartment (g) for a piece of lead glass for the protection of the operator and (f) a larger compartment for a removal frame holder (h) containing a fluorescent screen which fits in the opening (f) is interchangeable with a special plate holder (j) containing an intensifying screen (Threlkeld-Edwards); the handles (k) enable the cylinder to be readily manipulated.

In practice the cylinder is centered over the target of the X-ray tube and compression made upon the tissues as described in Holz knecht's article. I would respectfully call attention to the fact that this compressor possesses all the advantage of the Bucky, with the added advantage that should we see an unusual condition under the screen we can quickly remove the screen and substitute a plate, thus making a permanent record. This cylinder possesses great value in the chest and abdomen. We are able in this way to better study the heart and lung shadows and according to Holz knecht, kidney and gallstones. But it is in my hands of more especial value in the study of small and restricted areas of the abdomen and will find a wide scope of usefulness in suspected stomach ulcer and growths, peristalsis of the antrum, the pylorus, duodenum, ileum, especially the ileocecal valve and appendix and both flexures.

It should be noted in passing that work thrown upon the radiologist is constantly increasing and is becoming more and more refined; more and more accurate.

It has been remarked that there is no normal or constant place or shape to the stomach, unless it be that the one constant thing about it is its changeableness. When empty it is contracted so that its walls lie in contact with one another, except at the cardiac end where they are slightly separated by an air bubble, the so-called "magenblase." It in no wise resembles the normal stomach pictured in text books on anatomy, nor does it resemble the shape of the stomach when it is distended with gas. The distension by gas overcomes the tonus of its musculature and we then have only an outline of its fibrous and elastic elements as represented by its submucosa. The real anatomic shape of the stomach, in the living, is determined largely by its musculature, and it is this correct, normal shape

that we see by the aid of the bismuth meal and the roentgen ray. The stomach itself is usually vertical with its fundus touching the diaphragm, its lesser curvature to the right, its greater to the left and downward, the antrum pylori turning up and to the right occasionally backward where it connects with the duodenum. Fully eighty to ninety per cent. of the normal stomachs conform to this shape and have been called by Riedel, the "fish-hook" type of Holzknecht, in which the pylorus forms the lowest part, the stomach gradually tapering down to this point obliquely from the left above to the right end about the median line. The shape and size of the stomach should only be considered in the standing position, for in the horizontal the shape of the stomach is extremely variable, depending on decubitus, pressure and location. In the upright position the greater part of the stomach lies on the left side, the pylorus being located just to the right of the median line. In the horizontal position it usually extends further to the right. There are practically no normal limits clearly definable, for many stomachs produce no symptoms whatever, are found to extend considerably below the umbilicus.

It is exceedingly interesting to watch the entrance of the food into the stomach and the action the stomach takes as the food enters. The food, after it passes through the cardia, drops to the bottom of the air sack, gradually opening the collapsed stomach walls like a funnel and the food slowly passes to the caudal end of the stomach. The first mouthfuls follow closely along the lesser curvature like in a groove arrangement. This passage of the food along the lesser curvature has been called the "Magenstrasse" (stomach street) by the Germans. As more food is taken, the wedge is increased and the greater curvature gradually moves away from the lesser and the characteristic stomach shape is produced. When the stomach is completely filled, we may notice a number of types of movement, both rhythmic and arrhythmic. The rhythmic movements thoroughly mix the contents of the stomach usually starting at the junction of the fornix and extending to the pylorus. The arrhythmic contractions are small ones seen along the walls of greater curvature of the corpus only and are believed to be due to the action of digestion itself. If the stomach contents are markedly acid, the peristaltic waves are usually deeper and more variable, usually in the normal stomach the bismuth meal begins to pass through the pylorus in a very short while and enters the first portion of the duodenum, which usually assumes a regular triangular shape, called the "cap," resembling in this respect a Bishop's cap.

We have a number of types of stomachs, depending on the tone of its musculature.

1. The hypertonic or "cow-horn" stomach, which readily empties itself in from two to four hours.

2. The orthotonic or "fish-hook" stomach, which usually empties itself in four or five hours.

3. The hypotonic where the greater and lesser curvature are approximately more than usual and the caudal end somewhat enlarged. This stomach usually empties itself in six hours, and,

4. The atonic or exaggerated form of the hypotonic, which usually empties itself in eight hours.

Roentgenologists consider the normal limit of stomach emptying to be six hours. In order to make this test, however, the patient should take no food or drink after the original bismuth meal until the examination for motility has been made.

Roentgenologists divide the stomach into:

1. Fornix ventriculi, which constitutes approximately the upper one-third of the stomach occupied largely by the "magen-blase" in the enlarged stomach, and which has little or no peristaltic movement.

2. The corpus entriculi, which extends to the heel of the bend.

3. The sinus ventriculi or "magensack," which occupies the place between the corpus and the antrum.

4. The antrum or egestory canal is that portion of the stomach beyond the bend, the pylorus forming its other boundary. The antrum is the most active portion of the stomach in forcing the food into the duodenum.

DISCUSSION:

D. Y. Keith: I do not do any fluoroscopic work, and there is only one thing that I would like to mention in connection with this subject. At the meeting of the American X-ray Society, at Cleveland, this year, an instrument very similar to the one Dr. Pope has shown, was exhibited but much smaller. It is made by the American X-ray Equipment Company, of Boston. As to the value of this instrument, I have no information, as I have not used it.

J. Garland Sherill: I think Dr. Pope is to be commended for spending so much time and patience in developing this idea, and presenting this beautifully worked out appliance. A photograph of it should be published in connection with the report.

Curran Pope, (Closing): Owing to the extreme illness of my brother, I was prevented from attending the meeting of the American Roentgen Ray Society at Cleveland, and if any one exhibited a cylinder similar to this one, I was not aware of it. I would really have been glad

if some one had devised such a cylinder, as it involved no little expense to work out this problem. Since last May I have devoted a great deal of time in the perfection of this instrument, but I think it has been worth it. I am one of those who believe that the average X-ray plate is practically worthless unless supplemented by a fluoroscopic examination. I hope some time, with the permission of the society, to demonstrate that fact. I can show a number of plates that I believe would be accepted by the average man as showing adhesions between viscera, in which we were able to demonstrate, by fluoroscopic examination, that no adhesions existed. Fluoroscopic work is hard, tiresome and disagreeable to a certain extent, but it often gives us information that could be obtained in no other way. I do not mean to decry the use of the X-rays. We cannot deny its value in elucidating problems that are oftentimes very obscure. There are certain things that we cannot do with the fluoroscope and we must rely entirely upon the X-ray plate. For instance, the study of the skull in epilepsy would be absolutely impossible without the use of the plate. However, if we can do anything to improve our present methods, and help us to traverse the dark and devious paths of diagnosis, it will make us feel that we have been of some help along this line.

W. C. Dugan: What does this instrument show in gallstone cases?

Curran Pope: Personally I would hesitate to trust my visual acuity in gallstone and kidney stone; in such cases I would rather depend upon the plate. However, there is one advantage in the use of this instrument in gallstone cases; that is, we can make an examination to see if the field to be rayed is in good condition and free from gas and fecal matter. Most men will give a case of suspected kidney stone a saline purgative and then make the plate. That is courting defeat. A case of suspected kidney stone should never be given a saline purgative, just as a case of suspected gall-stones should always be given a saline purgative. In the former, the shadow formed by the gas in the intestines will seriously interfere with the clearness of the plate, while in the latter it will form an area of contrast, accentuating the shadow cast by the gallstones above it.

So, after all, just as in surgery, each case demands a certain special technique.

Psoriasis—E. D. Holland, Hot Springs, Ark. (Journal A. M. A., March 13, 1915). reports three cases of psoriasis, treated by vaccines with success. The first patient had developed tonsillitis and bronchitis, during which the psoriasis seemed to suggest to him that it might be in this case an infection. He therefore made an autogenous vaccine from a culture from the tonsils and ceased treating the stomach, which he had begun some five weeks before.

TWICE RECURRING HERNIA REPAIRED BY FREE FASCIAL TRANSPLANTATION.*

By LEE KAHN, Louisville.

Reconstructive surgery is advancing by leaps and bounds. But a few years ago transplantation was restricted to cutaneous grafts, to-day in its extended range, fats, fascia, vessels, tendons, cartilage, bones, glands, joints and even organs are being successfully employed.

It might be thought that fascia owing to its structural density and meager vascularity would be unfitted for transplantation but clinical and experimental successes dissipate all theoretical doubt of its viability when so used. As a matter of fact its requiring so little nourishment to maintain its functional activity makes it all the better suited for the purpose, for the poorer tissue is in blood-vessels and the lower its cell development the more likely it is to survive transplantation. In this connection the experiments of Davis are of interest. Around firm rubber tubes fascia was drawn taut and sutured, they were then inserted in subcutaneous tissue and when removed 49 and 54 days later showed on microscopical examination normal staining fascia and no signs of degeneration; thus showing that fascia will receive sufficient nourishment if only one side is exposed to living tissue.

For transplantation, fascia has proven in a clinical way thoroughly practical and of wide utility. It lends itself to varied uses as in bridging tendons, supplying skull and dural defects, repairing ligaments, mobilizing ankylosed joints, reinforcing uncertain suture lines and as hemostatic patches on injured abdominal organs. To meet these needs flaps may be taken from any superficial aponeurosis without fear of interfering with the function of the part; the fascia lata, however, offers itself as particularly adapted for free transplantation, being always available, yielding without detriment to underlying muscles a supply that answers any need, being readily accessible and away from important vessels. In the case I report an autoplasmic flap of this structure was successfully employed.

M. S., male, age 23 years, a tailor, history of no special interest, except that at the age of 19 years he developed a left inguinal hernia. This for two years was supported by a truss and then operated on for radical cure. The hernia soon recurred and seven months after the first operation he was again operated on by another surgeon a double herniotomy after the Bassini method was done. Shortly thereafter his attending surgeon recognized a second recurrence. On June 2, 1914, at

*Read before the Jefferson County Medical Society.

the Jewish Hospital the recurring hernia was operated on by me. The sac was isolated, closed off from the general cavity and cut away. From the wound considerable scar tissue was excised; the previously transplanted cord was disturbed as little as possible and restoration of the Bassini closure attempted. For want of dependable supportive structure our deep suture line proved of doubtful security and gave promise of but a poor result. To have stitched the rectus border to Poupart's ligament would have only partially reinforced the defect, the idea was therefore abandoned and a fascial transplantation decided on. Accordingly the right thigh was aseptically treated with iodine and on the outer side the fascia lata was exposed by a 12 centimeter elliptical incision, its convexity directed forward. A ribbon of the ilio-tibial band 4 by 8 centimeters was taken from the fascia lata and while yet warm interposed between the internal oblique and the transplanted cord, its inner border tacked to the internal oblique, its outer to Poupart's ligament, the upper end fish-tailed to accommodate the emerging cord. The external oblique aponeurosis was imbricated and the skin wound closed. No effort was made to close the fascial window and though it allowed the relaxed muscle to bulge there was no consequent ill effect. With the exception of an iodine dermatitis of the thigh his recovery was without incident.

Six months have passed since the hernioplasty was done; its stability bespeaks the efficiency of this simple procedure and warrants my urging its consideration in difficult and weak hernial closures.

DISCUSSION:

Guy P. Grigsby: "To my mind hernia work is a good deal like bone work; it is a mechanical proposition. We have a defect to repair and must repair it with the best material available. However, I have never seen a hernia in which it was not possible to use the fascia or muscles in the immediate neighborhood to cover up the defect. In those cases where the transversalis or internal oblique have been insufficient, I have usually found it practicable to transplant some of the fascia of the rectus, or to use some of the muscle itself. The sheath of the rectus is split, and the fascia or the muscle itself, brought down to the ligament of Poupart. This is done after the method of Halsted, in which he uses the fascial sheath, but if that has already been used, then the muscle itself may be used.

I think the doctor is to be congratulated upon accomplishing a cure in this case. That is the essential thing, and the means employed to that end makes no difference.

Jno. B. Richardson, Jr.: It seems to me that an insufficient time has elapsed since the opera-

tion to enable one to say that a permanent cure has been obtained in this case. Hernia frequently recurs after a longer interval than six months, and I would be glad to hear a continued report of this case about three years from now.

An interesting feature of this case is with respect to the two previous operations. Evidently, they were either followed by infection or they were improperly done. If our technique is perfect, we will have very few recurrences. I have frequently seen the operation done in what I considered to be an improper manner. This impropriety lay in the placing of the deep sutures. These should be placed toward the median line, or as far into the conjoined tendon as possible. If this is not done, it is apt to split, and the hernia recurs through the split conjoined tendon.

Personally, I do not transplant the cord, because, so far, I have been able to obtain just as good results without it, and the operation is considerably simplified when the transplantation of the cord is dispensed with.

W. C. Dugan: I wish to congratulate the doctor upon the excellent result obtained in this case. I disagree with Dr. Grigsby in regard to there not being a place for this method. I have had two cases of hernia, in my experience, in which there was no tissue available to fill up the wound, and in these cases I was compelled to use the wire mesh. However, if I should chance to meet with a similar case, I should certainly try transplantation of fascia. I think it is much better for covering than the rectus. I have transplanted skin, and I am ready to believe that almost anything can be transplanted if our technique is right. The transplanted material should be handled entirely with instruments; never with the fingers. The result Dr. Grigsby has obtained is certainly a most excellent one.

Lee Kahn, (Closing): Answering Dr. Grigsby as to the availability of neighboring tissue, I will say that we tried the Bloodgood method and went so far as to split the rectus sheath intending to bring the border of the muscle down to Poupart's ligament but found it inadequate in this case; I really question whether Bloodgood's method can be made to supply a defect beyond the conjoined tendon.

Dr. Richardson is conservatively correct in not yet pronouncing this case a permanent cure, but I do believe that the perfect result after six months warrants calling attention to the method employed.

In conclusion there is one point to which I would like to call attention: in securing the transplant it is a good idea to take a little more than is apparently needed for there is always more or less shrinkage after its removal.

W. C. Dugan: Do you take any fat with it?

Lee Kahn: No, the fascia is freed of fat before it is stripped from the underlying muscle.

CIRCUMCISION.*

By HARRY L. READ, Louisville.

Circumcision is one of the oldest minor surgical procedures of which there is any record. Contrary to the belief which quite generally prevails, however, historical records show that the custom of circumcising male infants did not originate with the Hebrews, nor does it appear certain that it ever constituted an essential part of their religion. The procedure originated among the Egyptians over six thousand years ago, and some time later (exact period uncertain) it was adopted by the Hebrews and several other races as a routine measure. The priests gave it the stamp of religion, and it has so endured even after the climatic conditions which probably first prompted it have markedly changed by the extensive migration of the Egyptians, Jews and other races.

According to the evidence afforded by history, the original reason for practicing circumcision was as a preventive against infection from the so-called "blood-fluke" (*Bilharzia hemotobia*) of Egypt, under the presumption that this parasite was so abundant in the water supply of that country that in bathing it found its way beneath the prepuce, and the individual thus became infected.

It is not my intention in this paper to discuss the operation known as ritual circumcision. While I wish it understood that I do not favor universal circumcision, about which much has been recently written by various authors, at the same time I believe there are many instances in which the operation may be performed with distinct advantage to the individual; and under all such circumstances it should be done by someone familiar with the anatomy and physiology of the parts, i.e., by a member of the medical profession.

Obviously this seemingly trivial surgical procedure should not be undertaken by anyone who does not possess a thorough understanding of the anatomy of the parts involved, and he should also be conversant with the means which will insure the production and maintenance of asepsis and hemostasis. Statistics show that various diseases of serious import, such as tuberculosis, syphilis, etc., have undoubtedly been transmitted by the careless and unwise in the performance of circumcision upon both adults and infants; likewise that numerous more or less serious accidents have happened during the operation, such as the removal of so much of the foreskin that inordinate traction was later inevitable during erection, the arteries have been divided resulting in dangerous primary and secondary hemorrhage, the tip of the glans

penis has been excised, thus causing irremediable deformity.

Among the most prominent reasons for performing circumcision upon infants may be mentioned the following:

(1). Where reflection of the prepuce is impossible because of extensive adhesion to the glans (phimosis):

(2). Where the prepuce is markedly redundant and its elongated portion unduly contracted (phimosis):

(3). Where the preputial orifice is abnormally located or so small as to markedly interfere with normal micturition:

(4). Purely as an hygienic and sanitary measure to prevent accumulation of smegma and to insure cleanliness:

(5). To reduce local irritation from retained secretions and thus prevent reflex nervous manifestations, convulsions, etc.:

(6). To minimize the tendency to formation of the habit of manustrupration, sexual excess and ultimate venereal disease.

In the adult and adolescent the following indications seem worthy of mention:

(1). As a prophylactic against phimosis, balanitis, venereal warts, herpes, epithelioma:

(2). As a prophylactic against masturbation:

(3). Purely as an aid to genital cleanliness:

(4). To reduce the liability to syphilis, Neisserian contagion, and chaneroid:

(5). By preventing venereal disease in the male, to secure freedom from such contagion in the female, statistics showing that a large percentage of pelvic operations upon women are made necessary by venereal disease contracted from the male.

While circumcision has always been regarded as a simple procedure, it must be remembered that a certain degree of skill is requisite to its proper performance. However, I do not consider it necessary that such patients, either infants or adults, should be referred to the general surgeon for attention; the operation may be safely and satisfactorily performed by any practitioner of medicine possessing the essential anatomical understanding and necessary operative skill.

In the circumcision of young children the parts are first thoroughly cleansed with soap and water, followed by a weak lysol or bichloride of mercury solution. The use of the tincture of iodine is inadvisable in infants, because its application is likely to produce considerable irritation of the delicate structures. The penis is securely grasped with one hand and the prepuce drawn forward the required distance and held in position by the blades of a pair of small scissors or small forceps placed over the prepuce slanting upward and backward; after being sure that the glans

*Read before the Jefferson County Medical Society.

penis is not included, the tissues are then cut with a pair of straight-pointed scissors from below upward, removing the outer skin the edges of which are retracted to the corona glandis; the mucous membrane is then cut from before backward to the corona glandis; then by proper trimming (if trimming is necessary) the mucous membrane is made considerable longer than the skin; the cut surfaces are then ready for application of the sutures. Any bleeding points are ligated with No. 00 catgut, and the same material is used for the sutures. The first suture is inserted at the frenum, then one at the dorsum, and one on each side is necessary. In a certain percentage of cases in young infants, where there are no bleeding points to be ligated, and the two skin surfaces are in proper apposition, no sutures are required.

The wound is dressed with gauze to which has been applied a one per cent carbolyzed vaseline, or white vaseline and zinc oxide ointment equal parts, with 15 grains of chloratone to the ounce. This ointment is placed over the center of the gauze before application to the wound, and the customary napkin is then applied. The nurse is instructed to apply a fresh dressing after each miction. Whenever there occurs any swelling or edema of the parts, which is an exceedingly uncommon complication in infants, a wet dressing should be applied and changed at frequent intervals until the swelling and edema have subsided. I have found a saturated solution of boric acid to answer every purpose.

It is my practice to circumcise infants when they are about nine or ten days old, or so soon as the funis has separated and the wound has properly healed. Of course much will depend upon the physical condition of the child, and it is sometimes necessary to defer the operation until a later period. In infants under the age of three months, no anesthetic will usually be required; but thereafter it has been my custom to administer a general anesthetic.

As to the operation in adults: After sterilizing the parts in the manner already described, a line is drawn around the prepuce with tincture of iodine at the point where the excision is to be made, and the tissues are excised in the center of this mark. It is advisable to place a soft rubber catheter or piece of gauze bandage firmly around the base of the penis, which acts as a tourniquet to prevent the absorption of the novocaine used as the local anesthetic.

Between the ages of three months and twelve to fourteen years I have found it better to administer a general anesthetic and this also applies to very nervous and excited older patients; but the operation can usually be performed satisfactorily under local anesthesia unless the patient is intractable. For

this purpose I use a two per cent. novocaine solution which is injected with an ordinary hypodermic syringe.

I first inject the skin along the line where the incision is to be made, then by inserting the needle between the mucous membrane and the skin beginning near the frenum inject the solution deeply toward the corona in a circle. It usually requires in the adult from 1-2 to 1 dram of the novocaine solution to produce sufficient local anesthesia.

The prepuce is loosely clamped and excised in front of the clamp with straight-pointed scissors, beginning at the frenum and extending toward the dorsum, removing more of the skin from the region of the dorsum than from the frenum. The skin is retracted to a point just posterior to the corona, and the mucous membrane is then slit to the corona, trimmed and left about 1-4 inch longer than the skin. This is an important step in the operation to prevent undue traction upon the mucous membrane after the parts have healed. In excising the prepuce in adults, as well as in infants, care must be exercised to avoid injury to the arteries, also not to remove too much of the integument, and to be sure that no damage is done to the glans penis.

All bleeding points should be carefully ligated with fine catgut the tourniquet being gradually loosened, as it is essential that hemostasis be complete. For the suture material in adults I employ No. 1 chromic catgut. The first suture is inserted at the frenum, then one at the dorsum, and one upon each side, the suture ends being left three or four inches long to be used later in holding the dressing in place. As many other sutures are introduced as may seem necessary, to secure proper approximation of the cut surfaces, of course the fewer the better.

The dressing consists of a piece of sterile gauze which has been thoroughly impregnated with equal parts of boric acid and stercate of zinc. This is rolled to about the size of an ordinary fountain pen and placed over the suture line. The dressing is held in position by tying the suture ends which have been left sufficiently long for the purpose, first tying the one at the frenum, then the one upon each side, leaving the suture at the dorsum to be tied last. The gauze is trimmed the proper length at the dorsum before fastening the last suture.

If desired an ordinary light roller bandage may be placed over the dressing to make it feel more comfortable to the patient. It is important that all sutures be not too tightly tied over the dressing, otherwise in case erections should occur the penis may be unduly constricted. Usually one dressing will be sufficient, it being left in situ for seven to twelve

days, by which time the wound will have healed.

The after care in adults is of little importance, especially as the dressing is not to be removed for about a week. I generally furnish the patient with an ordinary glass test tube, which has no bottom, and instruct him to urinate through this tube to avoid soiling the dressing. If the patient is a business man he is able to continue his occupation without interruption; but a laboring man oftentimes has to lose two or three days from his work. He is instructed to report to me the following day, and as often thereafter as may seem necessary until the primary dressing is removed, by which time complete healing of the wound has generally occurred. However, a second light dressing is usually applied and left intact for another week, to protect the tender parts from irritation of the clothing, etc.

The patient should be instructed to sleep in a cool room with light bed covering, keeping the bowels well open with mild laxatives. In this way it is possible to minimize the tendency toward erections during the night. If necessary chloral and the bromides may be administered. In removing the dressing the sutures are simply divided, and after being soaked with sterile water or peroxide of hydrogen the gauze can be easily separated.

By following the methods of operation and dressing as herein briefly outlined in the circumcision of both infants and adults, I have never encountered the slightest trouble from hemorrhage nor infection.

There is certainly no excuse to be offered for injury to the glans penis during the operation, provided due care be exercised; and with proper hemostasis and asepsis hemorrhage and infection should never occur.

It is sometimes quite difficult, especially in very young infants, to determine just how much of the prepuce should be excised, but for obvious reasons the removal of too little rather than too much is the wisest course to pursue.

Aid for Belgian Physicians.—"It would be merely repeating what everyone knows to state that conditions in Belgium are terrible beyond description, and that human beings are literally starving. Various methods have been adopted to improve the conditions, but most of them have been more or less general. In addition there have been developed methods for relief by groups," says the Journal of the American Medical Association, "among which is that conducted by the Committee of American Physicians for the Aid of the Belgian Profession. Specifically, the object of this committee is to relieve only members of the medical profession in Belgium."

TREATMENT OF PNEUMONIA IN CHILDHOOD.*

By J. H. PRITCHETT, Louisville.

There need be no apology for bringing before you this subject. While aware that it has been before us so often as perhaps to be a somewhat hackneyed theme, still after all has been said and done, we must confess that the mortality has been reduced but little. There is no specific for pneumonia, nor is there a routine treatment, yet, there are cardinal principles which should be observed in practically all cases. It is my purpose to confine myself to the treatment of the broncho and lobar types, and as far as they are similar, to discuss the two together. The lobar type occurs much more frequently than is thought. In the very young the broncho type predominates. The frequency with which pneumonia manifests itself in children is due to the histological structure of the bronchial and pneumonic tissue.

Quoting from Dr. P. F. Barbour, "The layer of epithelial cells which is found in the acini of the adult lung covering the capillary blood vessels, is undeveloped in the child; there is, therefore, a vulnerability of the lung to infection of various organisms and especially the pneumococcus." Before taking up the treatment proper, it is well to observe briefly some of the conditions of the two types. Fully ninety-five per cent of characteristic cases of lobar pneumonia are due to the pneumococcus. It has been shown by Netter that more than half the cases of broncho pneumonia are due to the pneumococcus plus other cocci. Cole states that the pneumococcus is able to cause two distinct reactions in man. First, a local reaction, which is the cause of the anatomical lesion of the lung in pneumonia, second a systemic reaction. Recent studies on the chemistry of pneumococcus have shown that this organism liberates a toxin which when taken up by the blood stream is capable of so altering the blood as to produce Meth-hemoglobin, thereby diminishing oxygen in the circulation.

In the bronchial type there is more than simply an inflammation of the bronchi, bronchioles and lobules; it is a mechanical obstruction plus toxemia. There is a secretion of mucous in larger or smaller quantities, depending upon the extent of the inflammation, the mucous being interposed between the air cells and the bronchus, is the obstruction. The blood contains less and less oxygen as the obstruction process progresses, therefore the blood cells, so to speak, are narcotized, rendering them less active and capable of combating the toxemia. The problem then in the

*Read before the Jefferson County Medical Society.

bronchial type is to overcome the obstruction, combat toxemia and prevent exhaustion.

The lobar type usually occurs in children over three years of age, the condition is usually that of toxemia. This type is usually well borne by children, and according to Kerley there is a strong tendency to recover. The danger to life in the lobar type is generally the heart, either through vaso-motor paralysis or cardiac insufficiency. It has been proven that on section of the splanchnic nerve in an animal, an enormous quantity of blood accumulates in the intestine producing an intense anemia in other organs. The splanchnic is the vaso-motor nerve to the intestine and its section causes paralysis of the vaso-motor function and enormous dilatation of the blood vessels. We may with considerable safety assume that the toxic effect of the pneumococcus on the vaso-motor center produces the same result in man. The blood pressure falls lower, the heart draws blood from other important organs and throws it into the splanchnic area, the heart becomes more and more rapid and ineffectual and finally stops. The inter-cardiac pressure being so reduced the myocardium ceases to contract.

According to authorities there is no known means of arresting or aborting the pulmonary infection. The lobar type runs a limited course passing through certain processes. The bronchial type is not limited, nor does it run a definite course. We are therefore restricted to such measures as will assist nature in her struggle against the disease.

GENERAL CONSIDERATION.

It goes almost without saying that the little patient should have the best possible hygienic surroundings. If possible isolate the child for the reason that the process is an infectious one, and should the condition be secondary to some infectious disease, all the more reason for isolation. A light, sunny and easily ventilated room is to be desired. If possible secure the services of a good nurse, otherwise instruct the mother briefly but definitely as to the care of the patient. The patient should be warmly but loosely clothed, put to bed and kept there, but turned at frequent intervals to prevent hypostasis. In older children the use of the bed pan should be enforced. Only the immediate attendants should be allowed in the sick room. These instructions while seemingly trivial and unimportant, will, if properly carried out, be a big factor in the successful treatment of pneumonia. It is convenient to discuss the treatment as follows:

1. Dietetic.
2. Local, including applications and hydrotherapy.
3. Open air or cold fresh air.
4. Drugs.
5. Serum.

DIET.

Recently a German army officer summing up why the Germans should be victorious, concluded by saying "A soldier fights on his belly, the German soldier is fed properly, therefore he fights well." So it is with our pneumonia patients, if they are to fight the infection well, they must be well nourished. This is an important and often a difficult task. The patient should not be underfed, else his strength will fail long ere the fight is won, nor should he be overfed with the result that the alimentary canal be clogged, the abdomen and intestine be distended thus embarrassing the heart. Often in children who are on the bottle, feeding by the drop method or by gavage must be resorted to. When digestion is disturbed or impaired, peptonized milk is of value. Small amounts at frequent intervals is better than a larger amount at longer intervals. Alcohol in the form of good whiskey or brandy is undoubtedly of much value as a food. It is quickly used up furnishing energy, thereby sparing nitrogenous waste. The indiscriminate use of alcohol is to be condemned. It should be made an emergency food when the child refuses or is unable to take other forms of food. The judicious use of alcohol is often a life saver. When all the vital powers are at a low ebb, it will do much to sustain the patient until he is able to assimilate other food products. On account of the solubility in lipoids, it is very rapidly absorbed and taken up by the cells; its food value is unchanged in the presence of fever. It demands less energy from the digestive organs than fats and starchy foods and while it cannot supply the place of nitrogenous food it prevents nitrogenous waste.

Quoting from Cushney, "The final results of all the investigation in reference to alcohol, is that it can take the place of some fat in the food and leads to the same economy of protein as the ordinary non-nitrogenous constituents of the dietary."

In older children, milk, egg albumen, water, beef juice, orange juice, wine with egg, and as the patient improves, broths can be given. The regular diet should be approached gradually. For those who refuse food, rectal feeding should be instituted, at the same time alcohol per os should be given. All patients should be given water freely, this helps to replace the loss of watery elements in the tissues, flushes the urinary tract and tends to carry off toxins. The amount, kind and variety of food depends upon the age and condition of the patient.

LOCAL.

The use of the heavy poultices, thick cotton jackets and oily preparations is obsolescent. That for which they are used can be accom-

lished by the use of mustard plasters. The mustard is applied and left on till the skin is reddened and then removed and applied to other spots. It must be remembered that the skin of a young child is very sensitive and tender, therefore due care must be observed lest a burn result. The mustard bath as described by Heubner is very popular with some men. The ice coil to the head is of value; it tends to allay nervousness, to reduce fever and to lessen the meningeal irritation. As to the use of ice bags, cold compresses and the like, we must be guided by the manner in which the child is affected by such. Should the weather be warm, the cold is usually well borne and is pleasing to the patient.

HYDROTHERAPY.

Sponge baths varying in temperature from the tepid to the cold will usually be all that is necessary for antipyrexia given at proper intervals the baths are soothing, reduce fever and benefit the system generally. The cold bath or cold pack can be used during the warm weather. It is a well known fact that children bear fever well. It is not so much the degree of temperature as it is the condition caused by the fever that we are especially concerned with.

COLD FRESH AIR.

We are realizing more and more the value of cold fresh air in the treatment of pneumonia. The conservative use of fresh air in certain cases of bronchial and practically all of the lobar types at intervals during the twenty-four hours is undoubtedly of much value. Should the case be a pronounced bronchial or laryngeal one, the cold air is contra-indicated. The pneumonia tent can be used or in lieu of this, the bed can be moved close to the open window. It is the custom in some hospitals to put the pneumonia patients in the open wards and keep them there. During the time the patient is in the cold air the head and ears should be protected. It seems to the writer that the average patient should be in a constantly cool room and at intervals ought to have the cold fresh air from thirty to forty-five minutes. The effects of the cold air treatment on the system is general. It has been noticed that when the blood pressure is abnormally low, the effect of the cold tends to raise the pressure. This is thought to be brought about by reflex stimulation of the vaso-motor center by the action of cold on the face and mucous membrane of the nose. According to Kerr the mortality of broncho pneumonia is lower when treated with cold fresh air than with the usual method.

DRUGS.

But few drugs are indicated in pneumonia.

The tendency is to use too much of and a variety of drugs.

Our first duty is to see that the intestinal tract is cleaned out and kept clean, by so doing tympanities may be entirely prevented. Calomel alone or in combination with such as soda or aromatics should be given in broken doses. Castor oil is of value but many patients are nauseated by its use. Enemas when used not too frequently are of value in unloading the lower bowel.

As has been stated children usually bear fever well. Hydrotherapy alone is usually sufficient to reduce fever. The use of the coal tar antipyretics in children is to be condemned. Codeine or heroine when indicated are useful in relieving pain, to lessen nervousness and irritability, to lessen cough and to produce sleep. Such drugs should be given only when absolutely indicated.

THE USE OF ACONITE OR ITS ALKALOID

When the patient is seen early there is a small wiry pulse, rapid cardiac action, congestion in bronchi, bronchioles, lobules or part of a lobe, as the case may be, accompanied by fever incident to such a condition. Here aconite is indicated. Butler says "The drug seems to exert a peculiarly beneficial influence on mucous membrane. It is one of the most efficient sedatives in the irritative fevers in children. It is valuable in the first stage of pneumonia." There is a preparation on the market consisting of aconitine gr. 1-800, strychnine gr. 1-128 and digitalin gr. 1-64. The dose and frequency of administration depends upon the age and condition of the patient. The aconitine acts as a sedative to the rapid heart. The strychnine, while antagonistic to aconite, is in this combination synergistic as it tends to act against the untoward effect of the aconitine. The digitalin aids in sustaining the heart and is at the same time diuretic. The combination should not be used when the heart action is feeble or when degenerative changes are present.

EXPECTORANTS.

In the very young expectorants are contra-indicated, in older children given at the stage of resolution they are of value. The ammonium preparations are among the best, used alone or in combination with the iodides they hasten resolution and promote absorption. The use of the nauseating expectorants are contra-indicated. Atropine hypodermatically given when the secretions are very profuse exerts a wonderfully good influence, lessening the secretions and stimulating both the heart and respiratory system.

STIMULANTS.

In regard to stimulation there is one point which is of much importance. When shall one stimulate? Many patients require but lit-

tle if any stimulation, others must be stimulated almost from the beginning, others only at the crisis or directly after; so it is by no means an easy task to determine just when to stimulate. For convenience we may say that the stimulants in pneumonia are of two kinds, slow and vigorous or emergency. When the heart begins to weaken we should make use of the more gentle stimulants, one of the best is strophanthus or strophanthin. This may be the only stimulation needed or again there may be evidence of vasomotor paralysis in which case, the emergency stimulants must be used, strychnine hypodermatically given is one of the most used; in a nervous, irritable child it must be cautiously given. Camphor in oil or ether is an excellent stimulant. It is, however, fleeting in its effect and must be repeated. Another excellent drug as far as stimulation is concerned is caffein sodium benzoate. In the few cases in which the writer has had occasion to use it, the children were rendered very wakeful. In those patients where there is insufficient driving power in the heart muscle with a damming back of the blood in the veins, digitalis is the drug of choice. Once more we can use the aconitine, strychnine and digitalin, the aconitine lowering the high pressure and bleeding the patient into his own vessels, the strychnine acting against too vigorous depression of the aconitine and at the same time enhancing the action of the digitalin, and the digitalin by improving the pumping power of the heart, equalizes the circulation, fills the arterial system and relieves the venous congestion with its accompanying symptoms. When this is accomplished the aconitine should be discontinued and digitalis or strophanthus given. It is not to be understood that the drugs mentioned are to be employed in all cases of pneumonia, but rather as an armamentarium from which the physician may select the best drug to meet an indication at the proper time.

SERUM.

Much has been promised but very little actually accomplished. It seems to be the consensus of opinion that the serums are of but little value in pneumonias of childhood. It is said that the outlook in this particular field is very promising and it is to be hoped that in the near future they may prove of much value.

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REPORT OF THREE URINARY BLADDER OPERATIONS.*

By JNO. R. WATHEN, Louisville.

As it seldom falls to the lot of a surgeon to encounter three unusual bladder operations at the same time in one hospital, and as these are of recent occurrence, I take this occasion to report them and illustrate with lantern slides the technique which I employed.

Case I. Extreme cystocele or hernia of the bladder. Mrs. H., age 57 years, mother of several children, when first seen by me complained of a very large cystocele which not only gave her pain but annoyance in walking. There was no proidentia of the uterus, and upon examination in the standing position, the bladder could be pushed back and the fundus of the uterus felt across the bladder in ante-flexion. She was compelled to push the bladder up to entirely empty it. The operation which I employed in correcting this condition and which I illustrate with lantern slides, is one which has been very popular in Germany, but seldom used or even mentioned in the majority of our American text books. It is known as a vesicovaginal interposition of the uterus, credited to Wertheim, Martin, Dührssen, Schauta, Machenrodt and others. In the last year it is attracting much attention in the special societies and journals. The methods usually employed in the treatment of cystoceles are those of the ordinary small colporrhaphy and in doing these the anterior vaginal wall is removed and the edges of the lateral vaginal walls sutured together. This causes the bladder to fold upon itself and in time to shrink of its own accord. This latter method is successful in the small cystoceles, but in the large cystoceles it has been more or less of a failure. The best method in women who are no longer to bear children consists in so placing the bladder that it is put backward into the peritoneal cavity, resting upon the posterior surface of the uterus, and the uterus is fixed to the anterior vaginal wall, acting as a buffer against any descent of the bladder, fixing the uterus in a position from which it can never retrovert or markedly descend or prolapse; for retroversion is the first step in the development of a marked ptosis, descensus or prolapsus uteri. Cystocele in its real, uncomplicated type is a true hernia of the bladder, with the uterus even though somewhat descended, still in ante-flexion or retroversion. The technique of this operation will be shown with lantern slides later. The patient made an uninterrupted recovery and left the hospital in about two weeks. There was no inconvenience at any time from the transposition of the bladder. By this

*Read before the Jefferson County Medical Society.

operation we placed the bladder in the peritoneal cavity and the uterus out of the peritoneal cavity. The patient has since done well and considers herself entirely cured.

Case II. Utero-vaginal and vesicovaginal fistulae. Mrs. T., 50 years of age, when first seen by me presented a sad spectacle, as she was leaking urine in large quantity through the vagina, and suffering from the natural excoriation of the parts. Her previous history had been that she was operated upon about a year ago by one of our local surgeons of good repute, for cancer of the uterus. A total hysterectomy probably after the Wertheim method, was done at this time and following the operation there was complete anuria for 24 hours. One of our best genito-urinary specialists was then called to examine the bladder and catheterize the ureters, but in his report to me when questioned concerning this case, he said that his record showed that he was unable to catheterize the ureters or even find them at the time. He very wisely suggested to the operating surgeon that he reopen the abdomen and release the ureters from ligatures which had probably caught them. This was done on both sides, if I have been correctly informed when questioned concerning her previous history. Urine at once flowed freely, but later on these fistulae developed and she returned home in that condition. Several months later she again returned to the same surgeon and he operated to cure what he supposed to be a vesicovaginal fistula. This was not followed by success, and she remained at home until seen by me. Upon examination I found that a probe could be introduced along the fistulous tract of the ureter on the left side, and the same probe could be reintroduced into another tract leading through cicatricial tissue into the bladder. This patient's bladder was distended after the vesico-vaginal fistula had been temporarily plugged with cotton, and catheters could be introduced freely into the right ureter, and in the left only about one-half inch. This patient was also given methyl blue which was excreted freely from the right ureter orifice, but the left ureter orifice was shrunken and no color material came from it. As there was a large mass of cicatricial tissue on the left side below and to the outer side of the ureteral orifice, I realized that to produce a cure in this condition necessitated a somewhat large area of bladder resection. She was properly prepared for several days and the kidney function tested with phenolsulphonaphthalein. Considering the fact that about two or three inches of the ureter on the left side was destroyed, and that this sinus was in a mass of cicatricial tissue following two operations, I decided it would be better to remove the kidney on the left side with as much

of the ureter as possible, and then dissect out all the cicatricial tissue at vault of the vagina with the cicatricial bladder mucosa, so as to more or less transplant this bladder which I separated from the vaginal wall. The bladder was closed by the inverted stitch of Connell, the vaginal wall with celluloid thread, interrupted stitches. A self-retaining catheter was placed in this bladder for ten days and urinary antiseptics administered. The patient made an uninterrupted recovery without leakage, and as it is now considerable time since her operation, she is entirely cured. I at one time considered transplanting this ureter into the fundus of the bladder or into the bowel, but considering the mass of cicatrix following her two previous operations and various other factors in the case, I decided not to do so, but to accept the recommendation of Howard Kelly in his late book upon this subject in which he recommended that the kidney on the affected side be removed, as it has usually become diseased. This kidney was smaller than normal and seemed to contain much fibrous tissue compared to a normal kidney.

Case III. Master R., age 10 years, when first seen by me complained of pain in the lower abdomen and also occasional pain in the perineum. Upon examination with a stone searcher of small size, I found the little boy had a large stone in the bladder, and advised a supra-cystotomy for its removal. The stone removed I exhibit to the society to-night. It seems to be made of two separate compositions; the first or base I take to be uric acid and the outer phosphates.

The usual pain in the head of the penis and testicle was absent as a sign in this case. I did the usual supra-cystotomy operation, closing the bladder as in the method used in the previous case, namely the Connell inverted stitch. I placed drainage both through the urethra by means of a catheter and above by means of a large tube. The patient made a nice recovery.

Nitrous Oxid Gas in Obstetrics.—F. W. Lynch, Chicago (Journal A. M. A., March 6, 1915), reports that since July, 1913, he has used nitrous oxid gas in long continued analgesia in obstetric work, and has kept it up for more than an hour in thirty-four cases. The method used must not be confounded with the older use of gas for complete anesthesia about the time of actual birth. He uses a nosepiece such as that employed by dentists, and the patient is told to breathe deeply but rapidly through the nose. Five or six respirations produce analgesia, and then the nosepiece is put over the mouth, the patient told to breathe through the mouth, and the analgesia is maintained by mixing oxygen with the gas until the end of the pain.

PERITONITIS: WITH ESPECIAL REFERENCE TO THE USE OF IODINE IN ITS TREATMENT.*

By F. T. FORT, Louisville.

It is recognized that the term general peritonitis is really a misnomer, the cases being exceedingly rare in which inflammation involves the entire peritoneal area. Diffuse and circumscribed peritonitis convey a more accurate idea as to the existing pathology. Only rarely is pus formation noted throughout the entire peritoneal cavity.

I believe it is also recognized that peritonitis, *per se*, cannot be correctly classified as a disease, since some other pathology is invariably responsible for its origin. The term "idiopathic" peritonitis should, in my opinion, be eliminated from the nomenclature. For obvious reasons peritonitis is observed with greater frequency in females than in males, and the one great essential in its successful treatment is early surgical intervention.

The most frequent cause of both circumscribed and diffuse peritonitis is believed to be appendicitis. Other immediate causative factors are intestinal obstruction, gastric ulcer, strangulated hernia, dysentery, uterine, ovarian and tubal disease; more rarely cholecystitis, cholangitis, hepatitis, splenitis, thrombophlebitis involving the pelvic and abdominal viscera.

Diffuse peritonitis resulting from infective disease of the abdominal viscera is always a serious condition, although a circumscribed pelvic peritonitis may exist for some time without presenting any very grave symptoms. The clinical manifestations of peritonitis may vary greatly in severity. They may be barely perceptible in one case, and in another be so marked that the Hippocratic expression is already evident and the patient practically moribund when first observed.

If favorable results are to be expected, the pathology should be early recognized and suitable treatment instituted without delay. The mortality attending diffuse peritonitis has always been high, and it is to the treatment of this form that it is desired particular attention be directed.

In March, 1911, I had the pleasure of meeting Dr. E. E. Johnson, of Yazoo City, Miss. (now of Memphis, Tenn.) who was kind enough to give me a clear and succinct description of his method of using the tincture of iodine within the peritoneal cavity as an adjunct to other treatment in all forms of peritonitis. He stated at the time that he had been enjoying the method for several years. His statements were so convincing that I was

favorably impressed with his theory, and from the results he had obtained it seemed that tincture of iodine could at least do no possible harm to the pathological peritoneum, and that his method would be worthy of an extended trial. He said that he first experimented upon dogs after the development of peritonitis artificially produced, and this proved so successful that he later began the use of iodine in the human abdomen with the result of markedly lessening his mortality from peritonitis.

It is manifestly impossible for anyone to form an intelligent opinion as to the merits or demerits of tincture of iodine by experimentation upon the healthy peritoneum of animals. It is more than likely such treatment would produce extensive irritation followed by the formation of adhesions, and the evidence thus secured as to the usefulness of iodine would be distinctly misleading; but in the highly inflamed peritoneum it would not seem that iodine added to the infected area should cause greater adhesion or the absorption of toxic material than would occur from the pathology itself. On the contrary, it is the theory, which has been confirmed by the practical experience I have had with this method of treatment, that iodine to a certain extent neutralizes the inflammatory peritoneal exudate, thereby assisting in its resorption and thus largely contributing toward a cure in some of the desperate cases in which the mortality has been tremendous under other methods of treatment.

At the time of my conversation with Dr. Johnson, he had treated thirty or forty cases. Since then I understand he and Dr. Crisler have treated more than one-thousand cases of peritoneal infection using a 2-1-2 per cent. solution of the tincture of iodine in alcohol. Their success under this method of treatment has been remarkable, and the mortality has been reduced almost to the vanishing point.

Shortly after returning from the meeting where I met Dr. Johnson, I was summoned to a patient suffering from diffuse peritonitis following rupture of a gangrenous appendix, and I decided to try his method. The result was eminently satisfactory, and I have since then used iodine in nearly every case of peritonitis that has come under my observation. The following report embraces a few of the cases observed during the last two or three years.

N. B., female, aged sixteen years. Date of first observation, May 9th, 1912. Diagnosis appendicitis probably gangrenous with diffuse peritonitis. The parents of this patient refused to permit her to be operated upon at the time, but two days later (May 11th) after a consultant had emphasized the extreme grav-

*Read before the Jefferson County Medical Society.

ity of the condition, the parents reluctantly allowed her to be taken to the hospital where an immediate operation was performed.

Upon opening the abdomen through a lower median incision, pus appeared from every direction; gentle digital exploration toward the right side caused the escape of a large quantity of purulent fluid; the hand was then gently carried toward the left, gradually pushing the intestines aside, and a still greater amount of pus was liberated from the left iliac region. The appendix was found gangrenous, and all the viscera were extensively adherent.

Sixteen ounces of a two per cent iodine-alcohol solution poured into the cavity was allowed to gravitate in every direction. Of course some of it escaped during the procedure. Three rubber drainage tubes with gauze in the center were inserted, one to the right fossa, one in the left side, and one behind the uterus. The patient was placed in bed in the Fowler position, and proctoclysis of saline-coffee given.

During the first twelve to fifteen hours the indications were that the patient would almost certainly perish, but reaction occurred and she made an uneventful recovery. She is now working in one of the department stores in Louisville, and as far as can be ascertained has remained perfectly well.

A. T., female, aged twenty-three. Diagnosis bilateral pyosalpinx with circumstribed peritonitis. Operation June 27th, 1912. One of the tubes was greatly distended and densely adherent, and rupture occurred during its removal, flooding the pelvis with pus. Six ounces of iodine-alcohol solution poured into the pelvic cavity, and a cigarette drain placed posterior to the uterus. This was removed at the end of three days. Healing occurred without complication. Recovery.

R. H., female, aged twenty-one. Diagnosis bilateral pyosalpinx with circumscribed peritonitis. Operation July 6th, 1912. In this case also one of the tubes ruptured during its removal, flooding the pelvis with pus. Ten ounces of iodine-alcohol solution poured into the cavity, some of which escaped. The abdominal wound was closed without drainage. Proctoclysis not used. Healing by first intention. Recovery.

M. J., female, aged twenty-seven. Provisional diagnosis tubo-ovarian disease with diffuse peritonitis. This patient had exceedingly thick abdominal walls, and the exact nature of the pathology present was undetermined prior to the operation. The operation was performed July 9th, 1912. Upon opening the abdomen a large quantity of purulent material escaped. All the viscera were densely adherent. After considerable difficulty the

adhesions were separated and both the tubes and ovaries, being extensively diseased, were removed. Great trouble was experienced in controlling the oozing which occurred from the separated adhesions. Nine ounces of iodine-alcohol solution poured into the pelvic cavity, a cigarette drain inserted posterior to the uterus, with three or four stay-sutures. The patient left the table in extreme shock, but rallied in about twelve hours. One pint of black-coffee-saline used by proctoclysis. Recovery.

S. D., female, aged twenty-two. Diagnosis appendicitis, probably gangrenous with diffuse peritonitis. Operation June 2nd, 1913. When the abdomen was opened to right of the median line, a large quantity of pus immediately appeared in the wound. The appendix was found gangrenous, and there was also a complicating bilateral pyosalpinx. Several ounces of iodine-alcohol solution poured into the cavity, and a large cigarette drain placed in the cul de sac of Douglas. The patient was placed in bed in the Fowler position. Proctoclysis of saline-coffee given. Recovery.

J. M., female, aged forty, admitted to the hospital the night of September 16th, 1914, suffering from appendicitis. Refusing emergency operation, we kept her in bed until the following afternoon, when the symptoms of diffuse peritonitis became apparent. The serious nature of the condition and the imperative need for immediate operation being fully explained to her, she finally consented and we lost no time in taking her to the operating room.

Abdominal incision was made through the outer border of the right rectus muscle, and considerable purulent fluid escaped. Nature had accomplished little toward isolating the infectious material from the gangrenous appendix which was located to the outer side and anterior to cecum. A decided fecal odor emanated from the gangrenous appendix which had ruptured and was so friable that its removal in the customary way was found impossible. We therefore simply "pinched off" the gangrenous portions with forceps, and applied pure tincture of iodine to the remaining stump and the surrounding infected tissues. Two rubber drainage tubes with gauze in the center were inserted, one in the cul de sac of Douglas, the other in the right iliac fossa. In addition gauze strips saturated with a three per cent iodine solution were introduced to the site of the gangrenous appendix and brought through the abdominal wound with the drainage tubes which had already been placed. The incision was partially closed and the patient placed in bed in the Fowler position. Proctoclysis of saline-coffee used.

This patient left the hospital within three weeks. A fecal fistula, which was anticipated, did not develop.

UNUSUAL CASE OF FISTULA.*

By J. GARLAND SHERRILL, Louisville.

Joe Lilly, colored, age 25 years, admitted to the hospital August 21, 1914: Family history negative; previous health good; used tobacco and alcohol moderately; habits otherwise good; occupation teamster. Had diseases of childhood; gonorrhoea two years ago; no other illness. Two years ago urethral discharge, for which he took ten drops of turpentine for nine days, when the discharge disappeared. The inguinal glands on the left side began to enlarge on the same day when he noticed the discharge. Three days later these glands suppurated. Healing took place in about two weeks.

In December 1913 the inguinal glands on the right side began to enlarge; suppuration followed and the pus was evacuated by his attendant, leaving a discharging sinus. The latter persisted until the following April, when he began to complain of pain over the bladder and an abscess of considerable size developed in the abdominal wall midway between the pubes and umbilicus, which was incised by his attendant. When this abscess was opened a considerable quantity of gas escaped but there was no fecal matter in the discharge. These facts were obtained from his physician. The abscess continued to discharge until he entered the hospital on August 21, 1914, at which time he presented several discharging sinuses in the abdominal wall through which fecal matter and urine were escaping. This condition developed soon after the abscess was opened and continued until the present time.

EXAMINATION.

Fairly well nourished man, weight about 130 pounds, head, tongue and eyes clear; neck negative; heart and lungs normal. Abdomen presents a considerable swelling above the symphysis, in the lower portion of which four sinuses present, one situated two inches to the left and above, and three to the right of the median line. Fecal matter and pus were oozing from these sinuses. A palpable mass was found in the lower abdomen, firm but not painful. Pressure upon this mass produced slight discharge from the openings.

Urinalysis, October 5th, showed urine translucent, greenish-yellow color, with foul odor; specific gravity 1022; acid reaction; granular casts abundant; a few erythrocytes present and leucocytes abundant. An effort was

made to obtain a skiagram of the sinuses by injection of bismuth paste. It was impossible however, to retain sufficient bismuth after injection to make a shadow. The explanation of this was found at operation to be due to the fact that the several openings communicated with each other.

Diagnosis, fecal fistula.

Operation, October 5, 1914: Median incision was made into the abdomen above the fistula. Intestine was found adherent to the abdominal wall over a large area. This was freed and an opening of considerable size was found which communicated with all the sinuses. It was immediately repaired. Further investigation revealed that the bladder was likewise connected with the fistulous tract and the opening in this organ was closed by suture. The main sinus was dissected out and the smaller tracts were everted and carbolized; two cigarette drains were used, one through the lower angle of the wound and one through the largest opening of one of the sinuses.

A very interesting feature in connection with this case was the fact that all four openings communicated with each other as well as with the bladder and the intestine, making a spontaneous healing exceedingly unlikely.

PATHOLOGICAL REPORT BY DR. GRAVES.

"Specimen consists of elliptical piece of skin 5 cm. long and 4 cm. wide, underlined with fat and fibrous tissue 4 cm. thick. In the center is an irregular fistulous opening; also elliptical piece 3x1.5 cm. with underlying fibrous tissue 4 cm. thick. Irregular piece fatty tissue measuring 5x2x1 cm. covered with blood stained fibrous tags."

The patient did very nicely, his abdominal wound and the sinuses being entirely healed, until October 25th, when after a very full meal he vomited and began to suffer with considerable abdominal discomfort. He showed some distention and developed hicough. This continued with increasing severity until October 28th, at which time he was in a critical condition, pulse 132, respiration 24, temperature subnormal. During this time he obtained some relief from gastric lavage, but was unable to obtain stool. On October 28 an enormous quantity of intestinal contents with feculent odor was removed from the stomach. Diagnosis of intestinal obstruction was made. His condition was so alarming that it was deemed unwise to subject him to general anesthesia, therefore under novocaine, one to four hundred, injected locally, his abdomen was opened and the intestine which was held down by small inflammatory band was freed. The intestine was only partially strangulated. Abdomen was closed in usual manner without drainage and the patient left

*Read before the Jefferson County Medical Society.

the table in fair condition, although his pulse was still rapid on the day following, rate 158, later slowing down to 130. For a day of so he improved and on the first of November he again showed rather serious symptoms, his temperature being subnormal, his face pinched and anxious, his pulse running as high as 140 and rather small volume. There was considerable distention at this time. The sutures had permitted the wound edges to separate some. On November 2nd the patient's condition was more critical and the question for determination as to whether it was best to again subject him to operation was discussed with Dr. Hendon and Dr. Abell, both seeing the patient with me. It was decided that any operative interference would be likely to prove fatal and we determined to apply hot compresses and employ gastric lavage and await the outcome. On the day following he had a slight movement and a small amount of gas passed and the distention was not quite so marked. I passed a probe down into the wound and liberated a small quantity of seropus. From this time he showed continued improvement.

A very interesting point in this case is the question of etiology. It is rather difficult to determine in just what manner the communication between the intestine, bladder and the abscess cavity became established. There were no evidences after the abdomen was opened of tuberculosis, nor was there any evidence of an appendicitis having been the original trouble. It is extremely unusual for an abscess in the abdominal wall to become adherent to the intestine and bladder in such a way as to eventually open into these structures, although of course this is a possibility. The fact of gas escaping from the abscess at the time his physician incised it would be suggestive of a gas bacillus infection, or that the abscess had already communicated with the intestine, or that the intestine and bladder were injured at the time of the incision. The fact that no fecal matter escaped at this time would incline one to the belief that a gas bacillus infection was present. The case is so unusual that I deemed it suitable for presentation to you this evening.

On November 27th (Friday) he ate two hard boiled eggs, four cold potatoes and a basket of fruit, and that night he was seized with convulsions which occurred a number of times during the day on Saturday; he was in a stupor on Sunday, improving during the afternoon, and when he became conscious did not remember anything that had occurred. These convulsions were epileptic form in type. Their exact cause we are not able to positively state.

DISCUSSION:

John B. Richardson, Jr.: Dr. Sherrill is certainly to be congratulated upon the result obtained in this case. Fistulae of the bowel are hard to cure, and when associated with one of the bladder, the difficulty is proportionately increased.

I think the doctor was wise in not making any attempt to close the abdomen. In those cases I have seen where the abdomen was closed before entire healing of the wound had taken place, the results were not good. Where we wait for the wound to close, and the skin heals over, we can do a hernia operation later on with no more danger to the patient than from operation for any other ventral hernia.

Jno. W. Price, Jr.: I had the pleasure of witnessing the operation, and I wish to commend Dr. Sherrill's operative technique in this case. The result obtained justifies the technique employed better than anything I could say.

W. C. Dugan: I wish to indorse Dr. Sherrill's method of procedure in this case. So many surgeons make the mistake of trying to go in near the fecal fistula, instead of entering remote from it, going into the general cavity and then down to the fistula, which saves a great deal of time and entails less risk.

J. Garland Sherill, (Closing): The etiology in this case is extremely difficult to understand. If it were a tuberculous lesion, we could readily understand how infection of the bladder might ensue, followed by the development of an abscess on the surface, as in this case, but I have never hitherto seen a case in which the bladder or gut was invaded from an abscess of the abdominal wall. While the history obtained was rather vague, I think that this abscess had been incised on two previous occasions, at which times gas and pus escaped, but no fecal matter. Four months later, when he came to the hospital, urine and fecal matter were discharging from these openings. I suspected tuberculosis, of course, but upon operation there was no evidence of such a condition.

Another interesting feature is that, although we closed the abdomen practically without drainage, a drain was later introduced through the lower angle of the wound, and a second one through the fistulous tract. The object of this was to prevent contamination of the lower portion of the wound. It is possible that the drainage may have had something to do with the later development of obstruction which, while not complete, was sufficient to cause distension, fecal vomiting, and shock, with a very rapid and feeble pulse, and it appears that he would die. When this finally cleared up, he had a number of epileptiform convulsions, probably due to dietetic indiscretions, although the possibility of worms was considered, inasmuch as the patient gave a history of worms when a child, and he gritted his teeth during these convulsions. He

had never before suffered epileptiform seizures as far as could be learned from the history. I do not know that a Wasserman test was made.

E. S. Allen: I can add nothing to the report except to congratulate the doctor upon the result obtained. The method employed certainly appears to be of value in repairing hernia especially. As pointed out by Dr. Kahn, the fact that the transplanted fascia will grow and maintain its vitality under conditions which permit it to receive but little nutrition, makes it an almost ideal reparative tissue. I have had no experience in transplanting fascia from one area of the body to another. However, we have all used fascia in the immediate neighborhood of wounds, for the purpose of filling up breaches, etc. I congratulate Dr. Kahn upon its successful use in this manner.

SOME OBSERVATIONS ON THE TONSILS.*

By A. McKENNEY, Owensboro.

The rapidly growing tendency of the radical specialist to remove every tonsil, whether it be diseased or not, as a prophylactic measure should cause every conscientious physician who has a clientele that rely on his advice, to pause and think.

The time has arrived when the general practitioner must be a general specialist; at least, he must know when to advise an operation whether he be skilled in the technique sufficient to do the operation or not. General medicinal and local treatment of the tonsils or tonsillotomy is no longer considered by the radical specialist; he has but one procedure and that is to remove the tonsils in capsule. Further consideration to him is a waste of time.

To show the exact status of the tonsils from the viewpoint of the radical specialist I desire to quote from Dr. E. F. Austin of Bellville, Ill., in his discussion of the papers of Drs. Levy, Beck and Surley at the meeting of the A. M. A., 1910: "The tonsils and adenoids are the chief portals through which infection enters the system. The greatest prophylactic measure that has been brought out in recent years is the complete enucleation of these masses. I believe the best tonsil is the one that has been enucleated, just as I believe the best Indian is the dead one. One can almost reduce to a minimum the diseases of childhood by completely removing these bodies."

Prof. Swain of Yale says: "If we are to judge from the opinions of many recent writers, the tonsils are dangerous things, and one who does not on sight enucleate every tonsil is not only derelict in his duty but a renegade

deserving lasting contumely." Another great light across the Atlantic said that were he like Frankenstein to undertake the artificial construction of man he would leave the tonsils out.

If these quotations show the true attitude of our medical brothers as regards the tonsils, and they are correct in their contention, then the medical profession deserves the severest censure for abandoning an operation that meant so much to mankind, and going after false gods, for we learn from McKenzy's bibliography that Celsus advocated and did tonsilleotomies in the year 10 A. D., and it was practiced for over four hundred years, or up to 480 A. D., when we find Aetius advocating and doing tonsillotomy. We have been worshipping this idol up to 1901, when Dr. Tidings, of Chicago, removed the first tonsil in capsule in America, thus reviving the old operation of Celsus.

Four hundred years is certainly long enough to test the merits or demerits of any surgical procedure and from the fact that it was abandoned as the best and only means that should be considered in dealing with the tonsil is proof that it was weighed and found wanting. Tonsillectomy is too serious an operation to be employed only for a very good and sufficient reason. Malignancy and tumors of the tonsils always justify their complete removal, in fact any pathological condition whatsoever that can not be relieved with local and general treatment or tonsillotomy, demands complete enucleation, but there are many pathological conditions of the tonsils that can successfully be relieved without employing tonsillectomy.

Prof. Killian of Germany said in 1910, "that so far as he knew the radical operation was not done in Germany, that it was considered only under special indications and it was the exception." Prof. Massei, of the University of Naples said also, "in forty years of practice I have never done a tonsillectomy and so far as I know it has never been done in Italy, particularly by specialists, except in cases of malignancy. Personally I believe tonsillectomy for simple hypertrophied tonsils, a fault, not only because I think the risk is greater, but also because I think it more correct to leave something of the gland. I have done in forty years practice about three thousand tonsilleotomies."

I wish to call your attention to a list of the accidents which have followed the operation of tonsillectomy, "not in the hands of the ignorant, but of the more skilled and experienced. Death from hemorrhage and shock; development of latent tuberculosis in the lungs and adjacent glands; laceration and other serious injuries to the palate and pharyngeal muscles; great contraction of the parts;

*Read before the Daviess County Medical Society.

removal of the barrier of infection; severe infection of the wound; septicemia; troublesome cicatrices; suppurative otitis media, and other ear afflictions; troubles of vision and voice; ruin of the singing voice; emphysema; septicæmia; increased susceptibility of throat diseases at the point of operation and others.

In view of these serious accidents which have followed tonsillectomy in the hands of the most skilled, it is but the part of wisdom to employ this operation only when it is imperative to do so to relieve the condition present.

The tonsils are not residual bodies from the fact that as we ascend in the scale of animal life the tonsils are more highly developed. The tonsils are not in our throat by chance. They were designedly placed there, I have no doubt, for a good and sufficient reason. The fact of our ignorance of their exact function does not justify their indiscriminate destruction to carry out a theory that they are the chief portals through which pathogenic germs enter the system; on the contrary our ignorance of their true function would make the cautious hesitate. The ultra radical tonsillectomist, in order to have a working basis aside from diseased tonsils, has designated a long list of common diseases which he alleges can be prevented by a careful removal of the tonsils. A partial list follows:

"Appendicitis, oophoritis, pleuritis, septicæmia, bronchitis, pericarditis, orchitis, osteomyelitis, nephritis, erysipelas, paraplegia, septicæmia, typhoid fever, rheumatism, and others."

They are assured that with the complete enucleation of the tonsils these diseases will cease to exist. Is it any wonder that the bright-eyed, dimple-cheeked, and red-lipped youngster is brought to the slaughter when assurance is given of a practical immunity against such a long list of formidable diseases?

Dr. McKenzie, of Johns Hopkins, says of the tonsil: "Whatever its function may be, and the production of leucocytes is undoubtedly one of them, the tonsil is not as generally taught and believed a lymphatic gland, and the general ignorance of this fact has led to the useless sacrifice of thousands of tonsils on the fallacious assumption that their functional activity might be replaced by the myriads of other lymphatic glands in the body." The tonsils are not like the lymphatics in origin but like the thymus and thyroid glands. Therefore they should be classified with the latter.

In regard to the tonsils being the chief portals of infection, I desire to submit some facts for your consideration presented by Faulkner of Pittsburg, based on observations made by Most, Hodephil, Jacobi and others,

in *Medical Record*, July 10, 1910; "The faucial tonsils are peculiar organs; they possess an anatomical character different from other tonsils and other lymphatic tissues; they are innocent organs with functions chiefly confused by medical literature. Their blood supply is scant and they have almost no communication with the lymphatic system; their crypts are lined by mucous membrane, having the ordinary function of other mucous membranes, so far as known; they are distinctly separated from very active absorptive and bacteriolytic structure of the fauces, pharynx and nose; their position is a segregated one; their external deep surface is covered by a dense fibrous capsule which sometimes sends a network of fibrous tissue as outrunners along the tonsillar blood vessels; the tonsils contain a system of closed lymphatic canals in the follicles which do not open into the connective tissue reticulum; a diphtheritic membrane confined to the tonsil is relatively innocent; there are no lymphatic sinuses around the tonsils and the nearby lymphatic current is less active than that of the pharynx at same distance, and finally injections made in the region of the tonsils, not even in the tonsils themselves, do not spread like those made into other parts of the nasopharynx."

It is clearly apparent from a histological and anatomical viewpoint that the tonsil is not a lymphatic gland and it was not designed to be an absorptive gland so far as conveying infectious agents into the system. All of us know that so long as a diphtheritic membrane is confined to the tonsils that adenitis and constitutional symptoms are the minimum, but when the surrounding tissue becomes invaded, especially the nose and naso pharynx, constitutional symptoms are the maximum. This within itself is conclusive that the tonsil is not an active absorbent and that there are other ports of entry more dangerous than the tonsils that have to be reckoned with.

Why decapitate the hare when the lion is loose in the land?

It would be almost inconceivable if it were not true that a body of scientific men would take a theory not substantiated and proven, as a basis for a capital operation, the end results of which have many times proven disastrous to the patient.

The internists of many of our hospitals insist on tonsillectomy being done on every rheumatic patient admitted. This is a bold and radical step that will not stand the test of time. Why rheumatism should be put upon the tonsils I do not know. We do not know that there is a germ that produces rheumatism, and if we did, how do we know and by what logic do we conclude that it finds its way into the system through the tonsils, when there are myriads of other channels from the

month to the anns through which infectious agents can enter, more inviting than the tonsils.

If the tonsils are such broad highways with free passes issued to the rheumatic germs, I also ask why do we not encounter rheumatism in children oftener than we do in adults, when childhood is the period in which the tonsillar activity is the greatest?

Instead of the tonsils being a danger signal and a port of entry for pathogenic germs, it is strongly believed by many of the highest authorities that the tonsils are avenues of exit for infectious material, protecting the organism from danger, and that the pathogenic germ found sometimes in the tonsils is coming out instead of going in; that they are the store-house, or manufacturies of leucocytes, "and represent the extreme outlying protective ramparts," and that enucleation, therefore, would mean a tearing down of the walls of defense against infection from the throat to the neck lymphatics; that the afferent flow of lymph exceeds the afferent in volume and velocity and that there is an endless flow of lymph from their interior to the free surface which prevents the entrance of germs from the surface and washes out impurities from within, therefore it is paramount to save the tonsil as we would any other organ of the body.

Since it is true that the leucocytes are the defensive forces of the body and inasmuch as the leucocytes are products of the tonsils, then to destroy the tonsils would be to lessen the leucocyte production, therefore weakening the defensive forces of the system, lowering the opsonic index, inviting disease.

It is my firm belief that if we would devote more time to the condition of the mouth and nasal passages, keeping them in a healthy condition, it would go a long way farther as a prophylactic measure than the senseless war on the tonsils.

Lichen Planus.—R. L. Sutton, Kansas City, Mo. (Journal A. M. A., March 27, 1915), says that the hypertrophic forms of lichen planus are relatively common, but he describes two cases which are different from the usual type. Both occurred in men, and were large, rough, scaly eruptions with some satellite lesions, not resembling the ordinary papules. The patches consisted of closely aggregated groups of large, flat, or oval top scaly papules, hard and resistant to the touch. The peculiar feature, however, was the arrangement of these nodules, many of them being only connected by bridge-like bands of diseased tissue, the skin enclosed being normal in texture. In the first case described the patches were large, and situated on the outer surface of the thighs. In the second case, they were mostly confined to the hands and wrist.

WHAT IS RHEUMATISM.*

By J. T. DIXON, Owensboro.

In the course of general practice of medicine it is occasionally our experience to encounter disease, where, through lack of system or perseverance we are unable to make a diagnosis, and when confronted with this predicament it is our custom to muddy the waters by classifying it with an ailment of many symptoms, and here rheumatism serves us well. If we have vague aches and pains about the body that cannot be attributed to any other cause we by force of habit call it rheumatism, and all too often find that we must subsequently change our diagnosis. Tyson says "The word rheumatism has been badly overworked, and charges mountain high have been piled up against this obscure affection, it has served the interest of doubtful physicians: it has assumed the responsibility of malingering, and played the role of fraud; it has been the financial pillar for the patent medicine manufacturer and has upheld the cults, the pathies and quacks; it has been a haven for stupidity and has contributed to the mockery of science."

Rheumatism was by the older writers described as a constitutional disease characterized by certain local manifestations seated in the joints and fibrous tissues and serous lined cavities. The exciting cause was claimed by some to be an excess of uric acid in the blood, and by some lactic acid, by others suppression of functional activity of the skin caused by action of cold upon the body; an inherited diathesis is claimed by some, in fact in former years the leading insurance companies made this inherited predisposition one of their important questions on all examination blanks.

This very wide difference of opinion of the actual cause of rheumatism by our very best teachers of that day such as Flint, Garrod, Prout and others, is *prima facie* evidence that the etiology of rheumatism was an unsettled fact even then before germs were known. Today, however, we know that the uric acid theory has no foundation, it has very little to do with rheumatism. It is an end product of metabolism and is an ever present constituent of the kidney secretion, and in many cases of rheumatism cannot be demonstrated in excess of normal quantity. The so-called uric acid diathesis has long been a name of mysterious import in medicine. One of those terms which to the scientific mind means unsolved problems, to the unthinking individuals it often serves as a veil to hide ignorance; for the quack and nostrum maker, especially the manufacturer of so-called ethical proprietaries it has been a money maker, and to the

*Read before the Daviess County Medical Society.

literature of this last class exploiting the wonderful uric acid solvent properties of their special article as only such literature can, we owe most of our knowledge of the horrors of uric acid. You cannot find these horrors in to-day's authoritative literature. Rheumatism is a disease characterized by certain symptoms conforming to other diseases of microbic origin. Its usual course is a day or two of prodromal symptoms, malaise, frequently sore throat, chilly sensations, or a definite rigor, fever, rising quickly, painful joints, coated tongue, profuse acid sweats of a peculiar sour odor which in a measure may be responsible for the uric acid theory. The blood is profoundly affected in acute rheumatism, a marked anaemia developing with great rapidity, suggesting the infection to be hemolytic action. In fact, there is a well-marked leucocytosis and in some cases hemorrhagic purpura or actual formation of pus in the joints. Could any disease of unknown origin offer a better picture of microbic infection. Osler says it resembles pyaemia very closely and may indeed be taken as the very type of an acute infection, that the multifiform symptoms of rheumatic poison in children and young adults may very reasonably be referred to the toxins of microorganisms. The character of fever, the mode of involvement of the joints, the tendency of relapse, the sweats, the anaemia, the leucocytosis and above all the very great liability to endocarditis and involvement of the serous membranes, all emphatically bespeak an infection.

Much work has been done to fix the responsibility on some specific agent, but so far (as in smallpox, measles, etc.) efforts in this particular have not been conclusive, though it would seem that opinion is firmly established that a microbe infection is the cause. In fact, the preponderance of evidence, although lacking in positive proof, supports the belief that the group of symptoms called rheumatic fever is caused by infection, the entrance of a specific germ into our system or body producing well defined classical symptoms. These symptoms are so constant that a strong belief has grown up that there is a single cause for rheumatic fever. We must admit, however, that when the symptoms are examined singly, none of them are found to be pathognomonic. The local picture of tuberculous arthritis aside from its single joint involvement, is practically identical in the beginning with acute rheumatic arthritis, and we all know of cases that have been treated for rheumatic arthritis a long time before its true nature was discovered. Gonorrhoea, syphilis, osteomyelitis, periostitis from streptococcus or staphylococcus infection, cause symptoms not easily distinguished from rheu-

matism, yet absolutely have no right to be classed with this malady.

Therefore the grave importance of having a clear understanding of all the facts concerning a supposed case of rheumatism, demands that we should not be content with hasty and superficial examinations, nor be satisfied to resort to empirical treatment, leaving the real cause, a focus of infection, undisturbed to do its utmost damage to a susceptible and delicate lining of the heart and other serous membranes. Oftentimes this damage is irreparable, it incapacitates for life. Certainly no mild and harmless infection could bring about such sequences. Therefore it is our duty to at least search most carefully for the focus of infection and if it be found, to take active and radical measures for its removal. It will in many instances cut short the disease and may save the sufferer subsequent attacks.

Drs. Mingus, Singer, and others claim that the point of entrance of this infection is through the mucous membranes. The pharynx, the tonsils and the intestinal mucosa. It has long been known that tonsillitis is a frequent initial symptom of the disease, 28 out of 66 cases in Singer's series. That the tonsils and pharynx are a frequent source of infection will be most convincing if we will but take the trouble and pains to examine the throats of every case coming under our observation.

Exposure to cold and damp seems to be a predisposing cause, although epidemics of acute rheumatism occur quite independently of such exposure. Exposure lowers our resistance to any disease, and exposure to cold and damp furnishes the most favorable condition for mucous membrane, catarrhs and infections, and a most favorable soil for a rheumatic infection, as well as any other.

It is my conviction that rheumatism is an infectious disease produced by a specific microorganism finding entrance into the body through the mucous surfaces. That if this point of entrance can be determined and the focus of infection be removed or attacked directly, the disease will be aborted or materially shortened.

I believe from empiric experience—as a remedy that salicylates in some form are the best, because they are antiseptic and highly destructive to specific types of germ life, they lower arterial tension, thereby relieving pain, they produce free sweating and reduce the temperature. If the infection should be through the intestinal mucosa, there are no better intestinal antiseptics than the salicylates.

If endocarditis is becoming manifest or if the arthritis is excruciatingly painful or the disease resistant to the ordinary treatment, the intravenous method of using salicylates

is of paramount importance. The method is to use a C. P. chrysaline sodium salicylate in 20 per cent solution with freshly distilled, sterilized water. From 6 to 10 c.c. of this solution (according to robustness of patient) may be slowly injected intravenously every eight hours through a fine sharp hypodermic needle; there is an entire absence of shock, prostration or other objectionable effects. The relief of pain is decidedly more pronounced, with a prompt recession of cardiac symptoms, than is manifest when the drug is administered by the mouth.

ANKYLOSTOMIASIS.*

By F. SILSBY TRIPP, Harrodsburg.

So far as I am informed, hookworm has not been reported from Mercer county.

The statement in the Bulletin of our State Board of Health, that uncinariasis is a "dangerous contagious disease;" and further, "that every Kentuckian is under the suspicion of having the disease until a specimen from his bowel movements is examined," is sufficient to cause the physicians to consider this in his diagnosis before concluding that our geographical area is beyond the border line of this contagion.

I here wish to report one case, the first, and to give credit to the progress of our County Health authorities in placing in the field the County Visiting Nurse, to seek for evidence of preventable disease and to secure treatment for cases discovered.

The important consideration relates to the source of the three cases discovered to date; and the question is *the disease to be here implanted?*

The first case has been a resident of the county for years and cannot be considered as imported; in the second family, the father, a river man, visits the mountain counties frequently; and could bring the contagion home; the third case, a patient of Dr. J. Tom Price, of Harrodsburg, whom I had the pleasure of visiting, comes from Lee county, where hookworm prevails, and certainly imported the disease.

The patient, J. J., age 26 years, single, well developed, farm hand. No history obtained of serious previous illness, or no hereditary trouble; he is the principal support of the family of five. The sanitary conditions at home are bad, but no worse than the average among such people.

June 24, 1914, while at work in the tobacco fields was overcome by heat-stroke; was prostrated for several days but he never regained his former physical status. There was no organic visceral disease discovered, and he was

treated for chronic diarrhoea, debility, anemia with functional disturbance of the heart for months; his emaciation was extreme.

In October 1914, the patient suffered with an attack of appendicitis, with evidence of diffuse peritonitis; he was very weak and critically sick. The improvement at times was never sufficient to take him from the invalid list. The diagnosis was finally tentatively made of chronic tubercular enteritis or peritonitis, awaiting laboratory confirmation, when he passed from treatment. The subject of hookworm had been discussed and a specimen for the laboratory obtained, but the same was brought to the office so soiled, it was discarded for one better. I at the time remarked that to send such a horribly fetid specimen to the laboratory, would be to discredit the treatment of any physician along the line of intestinal content putrefaction; the slogan "clean out, clean up and keep clean," and the use of intestinal antiseptics were negative, although the same had been accomplished time and again.

December 20, 1914, Mrs. Grober, our County Nurse, discussed with me the possibility of an examination for hookworm being made. A positive card being returned from the Bureau of Bacteriology, at Bowling Green, was the means of the patient receiving the customary thymol treatment, followed with a tonic of the solution of iron peptonate with manganese. Latest reports state that the patient has gained eighteen pounds and is in a fair way to be fully restored to health and usefulness. No other cases of intestinal parasites were discovered in the family, save one member with stomach or whip-worm.

Possibly greater endeavor would disclose the fact that we have hookworm with us in Mercer county, along with tributary streams to the Kentucky and Dix rivers, as sanitary conditions and surroundings are not materially different than those found in the upper counties.

Major-General Gorgas.—For the first time in our history a physician holds the rank of major-general. Regenerator of Havana, preserver of the Panama Canal, surgeon-general of the army, president of the American Medical Association, scientific physician and knightly gentleman, congress could honor General Gorgas only by creating a new precedent. In fitting company with Goethals, who dug the canal, stands Gorgas who kept the men alive while they dug it. With this new rank goes the thanks of congress and a life appointment as surgeon general.

*Read before the Mercer County Medical Society.

NEURASTHENIA.*

By E. D. TURNER, Sorgho.

Neurasthenia is not a disease in the same sense that tuberculosis or Bright's disease are diseases. It is a symptom group, the chief characteristic of which is a persistent neuromuscular weakness, with irritability. It is essentially a chronic, functional nervous disorder. Beard, in 1880, was the first to group the symptoms under one head and give the name neurasthenia, or nervous exhaustion.

Etiology.—Neurasthenia is not due to the pressure under which modern life is conducted, as was formerly thought, but is caused instead, very largely, from faulty conditions under which we attempt to perform our work. Dana says, "It is most often due to a bad heredity and foolish living." Gordon says, "It is caused by excesses of any kind. It is true that the human race does now suffer more from nervous irritability and exhaustion than at any other time, but as stated above, this is due to the faulty manner in which we perform our work. Heredity influences play a very important part in its development for we usually find a history of some nervous condition upon one side or both parents. This heredity, with foolish living, easily produces an exhaustion of the nervous system. Mental strain or shock, sexual excesses, poisoning with alcohol, tea, coffee or tobacco prolonged and uninterrupted intellectual effort, depressive emotions, exhaustive fevers, anxiety or worry, infectious like syphilis or tuberculosis may excite an attack of neurasthenia. Typical attacks are brought on by the fright and shock incident to severe injuries.

Symptoms.—The symptoms are really and fundamentally dependent upon a morbid weakness of the nerve centers. The patient complains of a feeling of mental depression and muscular weakness. He tires very quickly over tasks which were once easily and interestingly performed. Life has not the charms which it formerly had. He loses interest in life and suffers from different phobias, as that he will never get well or is going to become insane or paralyzed, or that some dreadful termination of his present malady is bound to occur. There is an inability to concentrate his thoughts, absentmindedness, a long conversation on any subject being impossible. He is depressed, discouraged and highly irritable. He avoids his best friends, is pessimistic, and in fact does not find pleasure in anything.

There is a diminution of muscular energy, the least exertion bringing on an unusual fatigue. In extreme cases the patient may refuse to stand, walk or move from one place to

another. He feels in some cases as if his limbs were going to give way under him. This muscular fatigue is not always continuous, but paroxysmal, relief for a few days then weakness again.

Headache is most always present. It is not always a genuine pain, there is a feeling of pressure or burning or a sense of fullness, heaviness or bandlike constriction around the head.

The neurasthenic suffers from insomnia. Not only does he not sleep the required hours, but there is a lack of restful and refreshing sleep. Upon arising in the morning he feels as if he had not slept at all. He fails to fall asleep readily, awakens frequently and often cannot sleep after the earlier hours of the night. This restless sleep is often accompanied by exciting and terrifying dreams.

There is backache which increases upon exertion or prolonged standing. The most frequent seat is in the sacral portion of the spine. The skin over the spine is over-sensitive so that the least touch or even the contact of the clothes makes the patient uncomfortable.

In all cases of neurasthenia there is found a disorder of the digestive system—coated tongue, fetid breath constipation, indigestion. The dyspeptic symptoms are due to a deficient motor innervation of the gastro-intestinal tract. It is interesting to note that in spite of the dyspeptic symptoms the patients do not lose in weight, unless the digestion is considerably disturbed when the general nutrition suffers.

Circulatory disturbances are very frequent. Cardiac palpitation occurs upon the least emotion. Sensations of cold or heat along the spine or in the extremities, lowering of vascular tension which are all due to deficient tone of the vasomotor apparatus. The face shows a tendency to flush at the least excitement.

The special senses suffer. There is a sensation frequently met with of difficulty in breathing, the patient complaining that he cannot get his breath well. The neurasthenic's eyes tire easily, cannot read for any length of time—spots before the eyes. The least noise gives painful sensations in the ears, various noises are heard by the patient. Taste and smell also suffer.

In the average case the sexual function is weakened. In some cases, however, we have sexual excitement, priapism nocturnal emissions, premature ejaculations, spermatorrhea, burning sensation in the urethra tenderness of the scrotum, testicles and penis. This has given the name of sexual neurasthenia.

We will have to differentiate neurasthenia from cerebral tumors, tabes, syphilis, exophthalmic goitre and hysteria. The symptoms of each of these are mostly objective while in

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neurasthenia the symptoms are nearly all subjective.

There are no known pathological lesions in a recent case of neurasthenia. When a person has suffered from neurasthenia for a long period, there are no doubt certain more or less permanent changes. Dereum has suggested the name of "terminal neurasthenia," in which anatomical changes have become fixed.

Treatment.—Neurasthenia is curable unless secondary to some grave disease, as tuberculosis or syphilis. Physical and mental rest is a most important element of the treatment. Cut out all excesses and correct foolish ways of living if possible. Give an antitoxic diet with a minimum amount of protein food. The distressing symptoms must be combated for a time with drugs. Bromides, veronal, sulphonal, trional for the insomnia, iron and arsenic for the impoverished condition of the blood, glycerophosphates, lecithin are excellent in asthenic conditions of the nervous system.

TUBERCULOSIS OF CERVICAL GLANDS.*

By J. W. KINCAID, Cynthlettsburg.

The lymph nodes which are most frequently attacked by tuberculous inflammation are those of the cerebral region, especially the upper set of deep cervical and sub-maxillary. The lymphatic distribution of this region being especially abundant, the glands being in close relation to the tonsils, the tongue, teeth rhino-pharynx and nasal mucosa. Hence a tubercular process in the tonsils, or a carious tooth may become the portal of entry as well as a tuberculous otitis, or even a pathological process of the skin, face or scalp. The primary focus may be so trivial as to almost baffle detection while the glandular involvement is extensive. Rarely the infection may have been carried through the blood vessels.

While no age is exempt yet the young are the most frequent victims, the age at which it generally makes its appearance being from three to ten years. Those of more tender age develop the disease oftener in the bronchial glands. An inherited predisposition to tuberculosis and those who are prone to glandular enlargements are the ones most likely to be affected. But independently of either of these classes, unhygienic surroundings, embracing light, air, sunshine, work, occupation, housing and food, will generally be found to furnish its full quota of cases. The acute infectious diseases such as measles, influenza

and scarlet fever in the order named are frequently the exciting causes.

The arrest of the tubercle bacilli in the lymph nodes may be regarded as conservative, especially if it serves to arrest their journey to more important and dangerous parts. The process in all tuberculous glands is essentially a chronic one, but several types can be distinguished. In the first, one finds many small tuberculous nodules, which are situated in the lymph nodules at the periphery of the node and in the lymph cord. The tuberculous changes begin in a proliferation of the flat endothelial and the connective tissue cells of the reticulum. In the center of these nodules cheesy degeneration often makes its appearance. Another type of the alteration in the lymph nodes is a diffuse hyperplasia of the flat cells with the production of more or less necrosis. In early cases there may be no necrosis and no giant cells. In later cases the necrosis may extend to the capsule and the node may contain no giant cells and no remnants of the original structure. Such nodes may soften and break down and then discharge their contents into the tissues or into an organ nearby* such as the lungs or the bronchi; or lime salts may be deposited in the cheesy matter and the whole node become calcified. The bacilli in these cases disappear from the node. In the acute cases the bacilli are found in the cheesy masses and in the giant cells which often contain large numbers.

As the glands soften, the process gradually extends from the center to the surface, implicating the surrounding tissue and causing extensive adhesions to the adjacent structures, such as blood vessels, nerves and muscles, fusing together and forming large knotty masses. Numerous sinuses may be formed, the skin becomes involved presenting a dark red or livid hue, and when it breaks down, it results in an indolent ulcer, with edges ragged and underlined. The sinuses leading to the affected gland are apt to be tortuous and are notoriously chronic and hard to cure. If healing occurs, a white, puckered and disfiguring scar remains strikingly unlike a simple adenitis.

A mixed infection from the ordinary pus-forming micro-organisms, staphylococcus and streptococcus may be present accompanied by pain, swelling, tenderness and the general symptoms of sepsis, thus obscuring the real origin of the trouble. When the process pursues a slower course, the cells are fewer in number, while the amount of fibrous tissue is much greater. The glands are not so vascular, but are tough and hard in appearance like small fibrous tumors having thickened capsules, frequently forming adhesions to the

* Read before the Kentucky State Medical Association, Newport, September 22-25, 1914.

surrounding tissues in which they are freely movable.

In the majority of instances the disease develops slowly and painlessly with perhaps no symptoms except glandular enlargements unless mixed infection be present. The enlargement is not always continuous, and may in fact diminish at times to take a fresh start under the stimulus of an attack of measles or scarlet fever or from a depreciation of the general health.

In rare instances, however, the affected glands may enlarge rapidly, becoming painful and accompanied by a rising temperature. If the glandular enlargement is of moderate severity the general health may not be appreciably affected in other respects, but if it is marked, the general nutrition will suffer and there will be anemia with loss of appetite, strength and vigor. The course of the disease varies from several months to as many years, three and one-half years being given as the average duration of the suppurating cases. In most of the cases where suppuration has not occurred, an improvement takes place about the time of puberty. Resolution is more apt to occur where there are several small glands involved and the process is slower than with one or two large ones. Death seldom results, although it may occur from sepsis, exhaustion or amyloid changes, but extensive disfigurements are not uncommon from the unsightly scars and swellings especially about the neck.

Freeman says there is considerable danger of tuberculosis appearing elsewhere, for instance in the lungs, which is a strong argument for early and energetic treatment. Treves says "The percentage of those who fall victims to tubercular disease is so small that the probability of the disease may be put out of the question," and that to urge the prevention of phthisis as an argument for operation is unworthy of consideration.

A differential diagnosis must be made from simple adenitis, Hodgkin's disease, lymphatic leukemia, secondary carcinomatous lymph nodes and syphilis. The clinical picture presented by any of these conditions from a local physical examination is strikingly similar and arriving at a final conclusion, a careful history and thorough physical examination aided by differential blood counts, sero-diagnosis as tuberculin or by Wassermann reaction and roentgenoscopy may be used. The diagnostic features of tuberculous glands are the age of the patient, the chronicity of the disease and the general absence of inflammatory symptoms except in the suppurative cases. In Hodgkin's disease other groups of glands are involved simultaneously or in rapid succession, they are softer and easily outlined and there is an absence of the matting to-

gether so characteristic of tuberculosis. Syphilis is recognized by the history, the acuteness of the glandular enlargement, other accompanying lesions and the absence of sinuses. Malignant growths are characterized by rapid development, attaining great size in a few months, and if in doubt a piece of tissue under the microscope will decide it.

The tuberculin skin test by the Pirquet method has many advocates but it is essential that tuberculosis in other organs be excluded before it can be relied upon. Schellble presents valuable technique for its use and says a positive reaction indicates that a child has been infected and has developed antibodies but not whether there is an active tuberculous process. In very young children tubercular infection is generally synonymous with an active process, but in older children the positive reaction should be weighed with the other findings. He considers that no other test in efficiency and harmlessness can be compared with it. George G. Davis says that tuberculosis of the lymph nodes can be definitely diagnosed by the Roentgen ray when necrotic and caseous changes in the nodes have taken place, as calcification only follows in the wake of such changes, and it is the calcification or the calcium salt deposit alone which causes the shadows with the Roentgen ray.

The treatment should be both general and local, the latter being non-operative or operative. It is highly important to discover the original focus and this can frequently be done by observing the group of nodes affected. The tonsils and adenoids, if affected, must be removed, and the teeth put in a health condition. It is often surprising to note the improvement in the glands following the painting of the tonsils frequently with iodine.

General treatment is always indicated because there is always a considerable number of cases which are either arrested or cured by this means alone. To get the children out of the sick room and away from the haunts of the germs of influenza, measles, streptococci, and pneumococci into an abundance of fresh air and sunshine, with nourishing food, will in time cure many cases. While there is not as much dependence placed in medicine as formerly, yet tonics, syrup of the iodides of iron, creosote or gnaiaol have a field of usefulness.

Jopson says that tuberculin will in time largely supplant surgery in the treatment. Favorable results from its use are quoted from numerous authors in the work of Hamman-Walman on Tuberculin in Diagnosis and Treatment. Wangh calls attention to the fact that many non-tuberculous glands have been treated with tuberculin. In the same work Guinard is cited as always observ-

ing softening and liquifaction following its use. Schellble who advocates it as a diagnostic agent condemns it remedially. Dr. Dormance of Philadelphia also considers it dangerous as being liable to disseminate the process acutely in other organs. Freeman says that tuberculin is still on trial.

Phillipowicz says that the Roentgen ray is the most effectual of all measures, as the glands subside in size under exposure, fistulas heal with a flexible cicatrix, and the whole organism is benefitted. All forms respond to the treatment, which consists of sittings of ten minutes once in one or two weeks, fifteen being required. Peterson says that improved technique in the use of the Roentgen ray has brought most excellent results. Its advantage over surgery being that they act on all the nodes, even those with incipient lesions too minute to be clinically apparent. He advises six full doses for a course, and waits for a month between sittings.

If after two or three months of constitutional treatment no improvement follows, resort must be had to surgery which offers the advantages of a complete removal and the danger of a general infection. In addition, a clean scar results instead of a large, irregular and disfiguring one. Such operations range from the simple enucleation of a solitary gland to the most difficult in surgery owing to the relation of the nodes to important nerves and vessels, requiring on the part of the operator the highest skill and complete anatomic knowledge. All surgeons are agreed that it is best to remove the lymphatic structures involved in mass, avoiding tearing out the glands violently if possible. If abscesses have formed, they should be opened as soon as pus forms, thereby preventing unnecessary extension, avoiding all squeezing of the gland and surrounding tissues.

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Boric Acid.—Boric acid, as an adjunct to other remedies, is extensively used in diseases of the skin, and as D. W. Montgomery of San Francisco points out (*Journal A. M. A.*, March 13, 1915), its subsidiary position does not detract from its importance, though it receives less notice than it deserves in the text books. Besides its mild and non-irritant antiseptic property, it is soothing, and when added to water, it increases its tonicity and prevents the detrimental action that may possibly occur.

SOME CASES OPERATED UPON IN THE SOMERSET GENERAL HOSPITAL, AND REPORTED AND DISCUSSED BY PULASKI COUNTY MEDICAL SOCIETY THE PAST FEW MONTHS.*

By A. W. CAIN, Somerset.

Case 1. Mr. S., a boy 16 years old, received a slight injury of knee about two years ago, so slight as to cause very little pain, so little that it did not keep him from his regular work. About nine months ago Dr. Price, of Dabney, saw him only once, finding a small growth on the inside of knee which was tender, and as the boy was anaemic recommended rest and constitutional treatment, advising the parents to allow him to watch the case and see him at frequent intervals. A short time later, Dr. Baute, of Somerset, saw the case and recommended similar treatment, neither of the doctors was allowed to keep the case under observation.

About this time a colored man calling himself "Doctor Anderson" was located at Kingston, Tenn., and was claiming to be infallible in diagnosis, by just feeling the patient's pulse, and was administering drugs which he and his friends claimed were performing miraculous cures. The father of the boy, without consulting either of his physicians sold about all of the live stock he had on his farm, (he being a poor man) and went to the "colored doctor," and remained eight weeks. He was told the disease was "serofula" and was treated with numerous drugs, local applications and violent movements of the parts was carried out twice per day, causing the boy almost unbearable pain. He grew rapidly worse each day. His father brought him here on December 9, 1914, the boy was anaemic, pulse 120, respiration hurried, there was practically ankylosis of the knee joint, notwithstanding the twice-a-day active attempts at motion the growth was as large as an infant's head, with large veins coursing over the surface.

A diagnosis of sarcoma was made and an amputation was performed at the middle of the thigh, the wound healed by first intention, the patient's appetite returned, pain ceased, and it appeared that the boy was going to make a good recovery, but about ten days after the operation, he began to complain of pain in left side, metastasis of the left pleura had taken place, this pain continued, not bad at first, but gradually growing worse, the disease extended to the lung and the boy died about two weeks ago, he only remained in the

*Read before the Pulaski County Medical Society.

hospital two weeks, the stump showed no sign of recurrence. Another case which might have been saved had he remained in the hands of his home physicians and taken their advice, the forcible attempts at motion and violent massage may have been the cause of the metastasis.

Case 2. Mrs. L., age 42, married, no children, menstruation regular, duration four days using only two or three napkins per day, has suffered from asthma for about ten years, about this time she noticed a growth just above the pubis, which as it continued to grow the asthma grew worse, she tried some physicians and a great many patent medicines with only temporary benefit, she was persuaded by some of her neighbors to visit the colored "doctor" at Kingston, Tenn., who told her the asthma was due to the tumor, and that he would have to give her medicine by the mouth and apply medicines locally to cause the tumor "to pass" which he "sure could." She told us that she was placed in a room with a woman who had a cancer of the breast which had broken down and was suppurating, and that twice per day, the so-called "doctor" would rub this woman's breast with a salve using the fingers then, without washing his hands would apply the medicine out of the same container to her abdomen, the woman grew worse under the treatment, the tumor grew more rapidly, she came home and asked that it be removed, she entered the hospital February 22. After the necessary preparation, she was operated on February 23, on opening the abdomen the tumor was found to have retained the same form as the uterus. in fact it was to all appearances a hypertrophied uterus, there was no adhesions, the ovaries were practically normal except the right one was adhered to the growth, the cavity of the uterus was practically closed, the points of interest were the growth maintaining the perfect form of the uterus there being no excessive menstrual flow, as is usually the case with fibroids, and the fact that the asthma began with the appearance of the growth and ceased with its removal, she left the hospital March 4th, wound perfectly healed.

Case 3. Mrs. N., age 40, mother of six children began to have jaundice four months ago, never suffered any acute pain severe enough to require an opiate, but suffered from an uncomfortable feeling in the region of the gall bladder, there was loss of appetite and strength, the jaundice became so deep that she looked more like a mulatto than a caucasian, the stools were of a whitish clay appearance. She came to the hospital February 21, 1915, and was operated on the following day. On first opening the gall bladder, quite a quantity of clear fluid escaped, then

more than three hundred stones were removed, many as large as small marbles, no stones were found in the ducts, but on account of the pressure which had existed for so long, it was 48 hours before much bile began to flow into the gall bladder then out through the tubes, after that there was an abundant flow, which continued throughout the time she remained in the hospital. She at once began to clear up, her appetite improved, and she felt so well, that she would go home twelve miles in the country in two weeks after the operation to be at her daughter's wedding. She continued to improve for a few weeks after going home, when she began to have scanty secretion of urine, her physician, Dr. Brent Weddle, Cain's Store, sent her a diuretic with instructions to let him hear from her if she did not improve, but her husband being her only nurse, the medicine was not administered, the kidneys gradually secreted smaller and smaller quantities till she died with complete suppression eight weeks after leaving the hospital, there being no pain in this case due to no stones having entered the ducts, and the pronounced jaundice with loss of flesh might have easily made us suspect malignant disease, possibly of the pancreas, and this cases should teach us the importance of opening all of these cases, explaining that the operation may be only exploratory. Had this patient remained in the hospital, and had not made this long trip through the cold so early, the complication causing her death might not have arisen.

Case 4. Mrs. D., age 64, mother of six children, youngest twenty years old, ceased to menstruate at 44, at 34 years of age she began to suffer from severe attacks of pain in the region of the gall bladder, so severe as to require the frequent use of opiates, these attacks continued at shorter or longer intervals, a diagnosis of gall stones was made and all of the ordinary remedies used. When she was first seen by me about one year ago, she was greatly emaciated, suffered from constipation and slight jaundice, could only eat the simplest diet, had not eaten any meat for thirty years. On physical examination, a well-marked tumor could be made out just below the ribs on the right side, a diagnosis of infected gall bladder was made, an operation recommended, which she gladly accepted, saying that she would rather die than suffer any longer. When she would try to walk she would support herself in the affected region with her hands. She came to the hospital on October 11, 1914, and was operated on the next morning, the ordinary operation was done, the gall bladder was greatly distended, with infected bile, but no stones. She remained in the hospital two weeks and returned to her home seven miles in the country in an

automobile, her restoration to health has been remarkable. She has gained flesh, her color is good and she eats anything she wants; her health is better than at any time since her first attack. Dr. Warren, of Science Hill, assisted in this case and a large part of the success is due to the care taken in the after treatment. It is a great mistake to operate on cases like this, and send them home without any one to look after their general health till their recovery is complete.

PELLAGRA; WITH REPORT OF CASE *

By J. H. HARRISON, Hawesville.

Sir Isaac Newton on one occasion, when being congratulated on his success as a scientist, said, "I seem to be as but a boy standing on the sea-shore, picking up now and then a pebble, to be gathered together in the great hereafter, while the ocean of truth lay undiscovered before me." So it is with one who may attempt to write on this most important subject. There is but little written, especially by the American writers that may be called authentic.

Just how long pellagra has existed there seems to be no definite conclusion. That it did exist many years previous to its recognition as a distinct disease there is no doubt. Goldburger is quoted as having recently said that its existence antedates the crossing of the Rubicon which statement is either offered in the way of ridicule or in rank extravagance.

The name pellagra is derived from the words pelle which means skin and agra, rough. Babas found this word in use prior to 1771. According to Babas and others pellagra was discovered in Europe in 1720, which date corresponds to the introduction of corn to that country. It is thought to have existed previous to this but not as a distinct disease and was classed with chronic enteritis and nervous diseases, leprosy and scorbutic manifestations. However, there is no positive proof that the disease antedates the introduction of corn as food. There is no agreement among writers as to the exact time of its appearance, however the first classification and description as a distinct disease is credited to Casal of Spain in 1735. Authors who have claimed to have discovered the disease previous to this have been deceived confounding it with syphilis and similar diseases.

Whether or not the disease owes its origin to the introduction of corn we are not able to confirm. But certain it is that in many countries where Pellagra was prevalent with the abstinence of corn food the disease has disappeared. We must bear in mind in this connection that it was never claimed that the use

of corn is responsible for the disease but by the use of spoiled corn foods.

Pellagra, as we well know, is a disease almost exclusively confined to the peasantry of the oriental countries and this fact alone launched the idea that it was due to corn diet. These poor people, we must remember are not able to consume the best of their products but are compelled to sell the choicest food and use that which is unfit for use and on account of its being in a spoiled condition this corn is infected with the *penicillium glaucum* or green mold which is claimed to be the true cause of the disease.

Much has been written by foreign writers on the cause of pellagra. Many of the best and most able men have spent years in study and research work and have written pages attempting to establish a definite cause for the disease but, to-day, we concede that the positive cause rests in obscurity. There are reasonable grounds for the belief that the source of the disease is soil pollution. Some of our Southern writers are setting forth the sandfly theory.

In my own opinion the focus of this disease is in the colon and is parasitic in nature. These parasites, as one has said, ingested with food, pass through the intestinal wall in the state of a spore and, as such, localize in the various organs or the tissue. Locally they set up a true inflammatory process and they elaborate very virulent poisons which give rise to the general intoxication.

There is no doubt very substantial grounds for the corn theory. That it is an intoxication there is no question of doubt.

Says Lombrosa, "If you should traverse the hills of Brianza you would most likely meet some pitiable wrecks of humanity, with eyes fixed and glassy, with pale and sallow faces, arms fissured and scarred as by a burn or a large wound. You would see them advancing with trembling head and staggering gait like persons intoxicated or, indeed, as if impelled by an invisible force. Now falling on one side, now getting up and running in a straight line like a dog after his quarry, and now, again, falling and uttering a senseless laugh or a sob which pierces the heart—such are the pellagrins, poisoned by the toxins of spoiled Indian corn."

With this word picture Lombrosa begins his latest and most elaborate treatise on pellagra.

When one has once seen a case of pellagra in its worst form, with the skin manifestation, the marked nervous affections, the characteristic delirium, it fixes a mental picture which is by no means easily forgotten. To my mind pellagra in its advanced stage pictures one of the saddest photographs in the whole category of diseases.

The toxic delirium, the staggering gait, the

*Read before the Daviess County Medical Society.

depressed spirit, the mental apathy, the disfigured face, all go to make indeed a sad exemplification of the disease.

Among the first symptoms we may have is a languid listless disposition with a tendency to become despondent. Sometimes dull headache with a pain in the lumbar region. Diarrhea with bloody or mucoid stools, marked stomatitis with red tongue and, as a rule, loss of appetite. The patient often complains of burning of the mouth and stomach, burning feet and itching face, sometimes for weeks before the eruption may occur. He may also suffer from muscular weakness of feet and legs. Babas considers dryness of the esophagus, burning sensation and pyrosis as the first pellagrous symptoms. Others note vague, fleeting pains in the extremities, tinnitus aurium, morning tire, pain in the joints, headache and vertigo and general debility. Some one has said that there is a peculiar redness of the tongue preceding the eruption.

We have at this time nervous depression, disturbance of memory, indifference to all surroundings, a disposition to cry at the least provocation. These symptoms you will find preceding and following the eruption. The dermatitis usually affects first the back of the hand face and arms and then around the mouth and sometimes over the chest, shins and feet. It is said that in South Carolina it is not uncommon for the dermatitis to assume the butterfly appearance.

Treatment is largely symptomatic. Certainly we must admit in the outset that there is no known specific more than we have for many other diseases but because of this, I don't think we are justifiable in acting as some who would claim that medicine is without any avail. Goldburger, in his recent investigations in the South, concluded that medicine had no effect whatever. We have no specific for typhoid fever, pneumonia and many other diseases, yet we are not willing to despair, hold up our hands and exclaim that there is no use so far as medicine is concerned.

Lombrosa's teaching should count for much, as he has given to the world the benefit of his wide experience in treating thousands of cases in the Eastern countries. He places a good deal of importance on the medical treatment. He recommends a liberal meat diet, but points out that this alone is insufficient. He recommends baths and cold douches which he thinks benefits the pyretic and the skin manifestations and the burning sensations. Of drugs he condemns the use of iron for the reason that he has seldom seen any benefit and has seen it cause exacerbation of intestinal symptoms. He does not consider arsenic a specific by any means, but that it is of very great value and acts in a certain sense as an antidote for the toxine. He com-

pares its action as an antidote with mercury and iodides for syphilis. Sodium chloride he considers a very useful remedy. He uses arsenic in the form of Fowler's solution in doses of five, ten, twenty, even thirty drops. The administration of the drug is suspended from time to time as the case may demand and warns against arsenical poisons, arsenical neuritis, etc. The well nourished seem to derive no special benefits from arsenic while cases with marked marasmus seem to derive much benefit. Some of the new preparations of arsenic atoxyl, samin, and others have not met with as much favor as the Fowler's solution. Salvarsan has been used by some but not with flattering results.

One serious objection to the use of the hypodermic is that we have a very low vitality and a disposition to abscess formations is very great. Many remedies have been tried. Some have given favorable results. Many have been found wanting. After all we will conclude that the treatment should be largely symptomatic. In most cases we will have a persistent diarrhoea and one that is, indeed, hard to manage. I find that large doses of bismuth subnitrate or subgalate with small doses of mercury give very good results in the way of counteracting the diarrhoea. Mercury is not well tolerated by these patients. Sometimes one may have to resort to a more violent astringent.

The skin manifestations are very perplexing ones as they give the patient more concern than any other symptoms and defies almost every form of treatment. I am of the opinion that nothing will relieve the skin trouble unless it is brought about by improving the general condition. Nervous symptoms should be treated as you would treat them if arising from any other source.

A great deal can be accomplished by suggestive treatment. The physician should ever keep in mind the vast importance of encouraging his patient. Possibly no other patient will come so near exhausting all of your psycho-therapeutic skill as does a case of pellagra. You will be taxed to the limit to keep the patient encouraged from time to time. The secret of success in the treatment lies in the early diagnosis, together with close watching, rigid diet, careful nursing and congenial surroundings which many pellagrins are not so fortunate to have.

It is to be hoped that the profession will soon find a cure for this dreadful malady as statistics will show that it is largely on the increase in the United States. Let us keep a sharp lookout for we may allow a case to escape our notice until too late for treatment of any avail.

CASE REPORTED.

It has been my good fortune to have seen ten cases, two of which I failed to recognize as pellagra having come under my observation several years ago, before there was much written in medical journals in regard to the disease. Through the kindness of Dr. Sights of Hopkinsville, I was permitted to see seven cases in the Hopkinsville Asylum in 1912. The last case applied to me for treatment July 3, 1914. Miss — —, aged 35. Gave previous history of good health until three months before applying to me for treatment at which time menstruation ceased and she had noticed a slow decline of health.

At the time of my being called to see her she stated that she had had something like the flux but was having no bloody discharge at this time. Bowels were moving from five to eight times a day, very watery stools with a bad odor. Complained of a general weakness with an uneasy feeling in the bowels and with gaseous distention. Temperature normal, pulse accelerated, 85 per minute, reflexes exaggerated, very nervous with marked despondency. Disposition to cry at the least provocation, disturbed appetite with burning sensation in the mouth, and stomatitis. Diagnosis, ileocolitis. Gave usual treatment for this form of trouble, recommended a light diet for a few days but saw no signs of improvement. At this time I began to think of the case as one of pellagra and, in a few days, my mind was thoroughly made up as to my diagnosis. At this time nervous symptoms became more exaggerated, bowel conditions had somewhat improved but no sign of an improvement in a general way. Eruptions appeared on back of hands, followed by eruptions around the mouth and on the face, nervous symptoms more exaggerated. Patient would cry at the least mention of her symptoms and, yet, she did not know but what she had a case of colitis. Nor does she know today that she ever had pellagra. At the end of three or four weeks after seeing her I began the use of Fowler's solution in ascending doses, together with a tonic treatment of liquid peptonoids, daily irrigation of the colon with normal salt solution, daily baths in salt water to allay pruritis. Diet consisted of strictly liquid, animal broths, vegetable soups and extract of beef. Gave of the beef about one teaspoonful once or twice a day. Secured the best of beef steak, put it in the meat press and extracted the juice. Patient grew very fond of it and I must say, did well on same. By September 20 could see marked signs of improvement, but patient ate too freely and had relapse, but in a few days was on the road to improvement. Not satisfied to depend on my own diagnosis altogether, I had Dr. Lock,

of Barbourville, who was then in Owensboro, to see her and he agreed with my diagnosis, also with my treatment, and assured the patient that she was on the road to recovery. Time proved that he was right as the patient had an uninterrupted recovery, as on the 28th of December the patient was dismissed as well. The patient is now apparently well.

One thing that I wish to note in the way of symptoms that is a little singular. This patient had a twilight eruption of the lower limbs. This eruption resembled hives and would make its appearance at evening twilight and at no other time. I do not know that this has any significance but make mention of the fact because of its uniqueness.

My opinion is, gentlemen, that the majority of these patients will recover if recognized early enough and the proper treatment, in the way of medicine and right diet together with congenital surroundings be procured.

Exposure of the Appendix.—One of the most important points to be decided in appendix operations, says William Neill, Jr., Baltimore (*Journal A. M. A.*, Jan. 23, 1915), is to decide what kind of an incision to make. Where the diagnosis is not absolute it is usually wiser to make a right rectus incision and with this, if a gangrenous appendix is suspected and if drainage is necessary then a small gridiron incision can be made near the anterior superior spine just where the drain is to be inserted directly down to the cecum. He calls attention to the method used by Dr. Thomas Cullen for exposing retrocecal and densely adhesive appendixes which he finds greatly simplifies the otherwise difficult and tedious operation. Not infrequently it is impossible to expose the appendix under such conditions, but he says in nearly every case it can be located by following the longitudinal band on the cecum. When once this is located Cullen runs a pair of Kelly blunt forceps through the meso-appendix at this point and grasps a piece of tape, the two ends of which are grasped in the tips of the forceps and used as a tractor. Strong traction is thus exerted without injury either to the cecum or the appendix, and nearly an inch of the appendix can be brought out. Another pair of Kelly forceps is inserted and grasps the second piece of tape and draws out a still further portion, and a third pair also inserted with tape will usually enable one to expose the tip. Sometimes only two tapes are necessary. The meso-appendix is now clamped off from tip to base and as it is cut the tapes are loosened and removed. They lie outside the abdomen and with care there is no danger of their being lost. The subsequent steps of the operation are naturally varied to fit the needs of the case. The article is illustrated.

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NEXT MEETING STATE ASSOCIATION, LOUISVILLE

September 20, 21, 22 and 23, 1915

COUNTY SOCIETY REPORTS

Crittenden—The Crittenden County Medical Society met in the office of Drs. Clement & Fox, Marion, Ky., April 29, 1915, and reorganized. The following physicians were present: I. H. Clement, J. R. Perry, T. A. Frazer, C. G. Moreland, J. E. Fox, and L. S. Trusler representing the A. M. A.

The following officers were elected: J. R. Perry, Marion, President; O. T. Lowery, Tolu, Vice President; T. A. Frazer, Marion, Delegate; and J. E. Fox, Marion, Secretary.

We meet the second Monday in each month at 1 P. M.

J. ERNEST FOX, Secretary.

Franklin—The Franklin County Medical Society met in regular session May 4th, at 7:30 P. M. Present as visitors,

A. H. Barkley, of Lexington, essayist, subject, "Fractures." W. B. McClure of Lexington, Orator on Tonsils and Adenoids

Membership present, Keller, A. A. Stewart, Heilman, Minish, Mastin, Williams, Patterson, Kehoe, Garrett, Fish, Wilson, Barr, Wallace, Montfort, Coblin.

The society was highly entertained by its visitors Drs. Barkley and McClure, with most excellent papers and discussions, both of which were generally discussed by the membership present and altogether was the most instructive and enjoyable meeting that the society has had in many months. A vote of thanks was unanimously extended to our visitors for their able presentations of the subject under consideration and a further invitation extended to them to visit us again. Adjourned.

U. V. WILLIAMS, Secretary.

Harrison—The Harrison County Medical Society had one of the best meetings it has held this year on May 3, at the offices of Drs. Martin, Rees & Moore. Eighteen members were present, and two visitors, Dr. Tompson, of Kentontown, and our old friend, Dr. I. A. Shirley, of Winchester, whom every doctor was delighted to meet again.

W. R. Wood read a paper on "Too Much Drug Treatment." This paper was discussed by Drs. N. W. Moore, Carr, Rees, Wells and Shirley.

J. E. Wells read a paper on "The Ethical Doctor"

Martin, Carr, Rees and Moore discussed the paper.

After the reading of papers and discussions, the society adjourned to lunch as guests of Drs. Martin, Rees and Bost.

While we have lost several members by death and two or three from non-payment of dues, our society is still doing good work, and most of our

members regular attendants at the meetings,
W. B. MOORE, Secretary.

Henderson—The Henderson County Medical Society met at the Public Library building, Monday evening, April 12th, at 8 o'clock, with President Neel in the chair. Minutes of the previous meeting were read and approved as read. There were present Drs. Dixon, Griffin, Moseley, Neel, Stone, Graham, Letcher, Floyd, Ligon.

Bills to Taylor and Henderson Publishing Co., for printing, were received and ordered paid.

The application of H. P. Clay, of Niagara, for membership by transfer from the Daviess County Medical Society, was received, and upon motion and vote he was received as a member of this society. The City Health Officer reported that there were about 300 cases of measles in the city, and after much discussion of the matter the chairman was directed to appoint a committee to meet with the city board of health, and that body to appoint a committee to act jointly with the committee from the society to go before the city council to urge the importance of creating the office of school inspector.

Wm. V. Neel read a very interesting paper on "Physical Factors in Diagnosis." The paper was complimented, and fully discussed by those present.

There being no further business the society adjourned.

PEYTON LIGON, Secretary.

Henderson—The Henderson County Medical Society met at the Public Library building in regular session on Monday evening, April 26th, at 8 o'clock P. M., with President Neel in the chair. There were present Drs. Floyd, Dixon, Moseley, Letcher, Stone, Griffin, Neel, Ligon.

The minutes of April 12th meeting were read and approved as read. Dr. Dixon as chairman of the committee to meet with the city board of health, reported that they had met, and that a joint committee had been appointed to go before the city council to urge the creation of the office of school inspector.

Wm. M. Floyd read in interesting paper on "Some Thoughts on the Ductless Glands, Especially of the Thyroid." The paper was freely discussed by those present and the subject will be continued at the next meeting, with Dr. Dixon leading. There is greater interest being manifested in the work of the society upon the part of some of the members, and in the writers' opinion this was the best meeting for many moons.

PEYTON LIGON, Secretary.

McLean—The McLean County Medical Society met at the Court House, Calhoun, April 15th at 1 o'clock P. M. Meeting called to order by the President, J. S. Fitzhugh. Those present were, Drs. J. S. Fitzhugh, W. P. Miller, H. W. Gates,

W. L. Haynes, P. D. Moore and W. W. Spicer.

This being the date for the election of officers for the ensuing year, the election was entered into and the following were elected:

W. P. Miller, Calhoun, President; O. V. Brown, Island, Vice President; W. W. Spicer, Calhoun, Secretary and Treasurer. Censors for the year are H. J. Beard, P. D. Moore and Alph Ayer.

J. S. Fitzhugh read a paper on "Doctors Dispensing and Druggists Prescribing."

H. W. Gates read a paper on "Fee-splitting and Medical Ethics."

P. D. Moore read a paper on "Pneumonia."

McLean County has been making an effort for several years to have a good medical society but has almost failed. There are nineteen doctors in the county and at no time do we have more than six or eight at a meeting which is once or twice a year. Out of the nineteen doctors there are not more than two thirds members of the society. Some doctors have not, to my certain knowledge, been in the society meetings within the last six years. I shall be pleased if you will send me a list of doctors in this county who are not members of the county and state medical society. The next regular meeting will be at Calhoun the 10th of June. It is the earnest desire that every doctor in the county be present.

W. W. SPICER, Secretary.

Lyon—The Lyon County Medical Society met on May 7th, 1915, at the office of Dr. Molloy. Members present, Drs. Kingsolving, Purdy, Phillips, Linn, Molloy, Travis and Travis. Meeting called to order by Dr. Kingsolving. Minutes read and adopted as read.

F. M. Travis read a paper on "Dysentery" which was discussed by all present. Program for next meeting, T. L. Phillips leader, subject not reported. Alternate, D. J. Travis, subject "Typhoid Fever with Report of a Case."

The society then adjourned to meet at Eddyville, May 18th, 1915.

F. M. TRAVIS, Secretary.

Muldraugh Hill—The Muldraugh Hill Medical Society was called to order at 10:45 A. M., in the City Hall by the President, Dr. H. R. Nusz, about thirty members being present.

The reading of the minutes was passed.

No business being before the Society the program was at once preceeded with.

S. H. Ridgway, of Shepherdsville, opened the program by reading a paper on "Some Overlooked Cases."

R. C. McChord, of Lebanon, opened the discussion: thought the paper a timely one and that it often profited us greatly to discuss our failures. One should not overlook cases of eye strain. Thought surgeon who made his diagnosis after the abdomen was opened was a dangerous man. One should not undertake to treat cases until he had a fair knowledge of the case.

P. F. Barbour, of Louisville, thought eye strain responsible for a great many obscure symptoms in children. One should advocate these examinations more frequently. He advocated careful attention to all middle ear troubles occurring in children with the removal of the adenoid in appropriate cases.

C. Z. Aud, of Cecilian, thought we should consider the lessons of the paper carefully. Deprecated the existence of itinerant spectacle vender who does a great deal of harm. Advocated careful attention to all middle ear complications. Thought pelvic complications required deep thought and one should have in mind possible undesirable after-effects following operation.

J. S. Lutz, Highland Park, complimented the essayist and thought we should all be honest enough to state when we do not know what the matter is. Eye patients often wander into disreputable hands to their great harm. Patients object to specialist for opening ears and are apt to neglect running ears. They should be educated to carefully attend to these organs.

W. E. Gardner, of Louisville, thought eye strain responsible for some of the neuroses but others are coincident with a nerve exhaustion. Cases should be carefully refracted. Patients should be told if eyes are not responsible.

Curran Pope, of Louisville, said one should look for cause of things but effects often persist after cause is removed. This sometimes defeats treatment. Thought Gould an erratic and uncertain authority. The eye, as Dr. Gardner says, may be only contributory. The eye is most influenced by emotions and one could be easily deceived in thinking the eye the real cause of trouble. One should be more careful in diagnosis. Didn't think ten per cent. of examinations were careful enough. Honesty alone wasn't enough, it should be combined with knowledge and a capacity for work.

G. C. Hall, of Louisville, emphasized the need of careful refraction work under complete cycloplegia even in cases over forty years of age. Glasses failed to relieve at times due to faulty refraction or disregard of muscle balance of the extraocular muscles. Greatly weakened patients often had difficulty in close work due to insufficiency of internal recti which could be corrected by building up the general health. Chronic suppurative ears should be cured by local treatment if possible. If that failed some minor operation, such as removing ossicles and outer attic wall and closing tube. In failure of this a radical mastoid should be seriously considered. Thought the doctor's paper timely and productive of much good.

S. H. Ridgway, in closing, thanked the members for their discussion. Wanted to say that he was very fond of the specialist and surgeon and thought it his duty to refer his cases into hands where they could get the best possible results.

He did not think it fair to the patient to continue to treat a condition if they could be restored to health faster by receiving special treatment.

P. F. Barbour, of Louisville, read a paper on "The Treatment of Broncho Pneumonia in Children."

T. E. Craig, of Colesburg, opened the discussion of Dr. Barbour's paper. Commended Dr. Barbour's treatment which he had learned as a student and which his experience had justified.

J. J. Adams, of Munfordsville, thought the old Larrabee fever mixture very efficacious. The formula in spirits aetheris nit. Potassi acetat, solution ammonium acetat, and aq. camphora. This with attention to bowels and kidneys, with plenty of fresh air constituted the treatment in his cases.

C. Z. Aud, of Cecilian, spoke of the progress of broncho pneumonia from above downward while the progress of lobar pneumonia is from below upward. The treatment of one is not applicable to the other. Thought great progress had been made in recent years in treatment and that old text books were sadly out of time. Referred to a recent reading of Watson.

Curran Pope asked Dr. Barbour if he had used cold surface pack or cooling friction in atelectasis.

P. F. Barbour stated that cold and hot applications to chest are often of benefit. Thought glycerinized pastes useful in relief of acute pleuritic pain but were sometimes disagreeable. While he thought old authors out of date in treatment, many of them showed a profound knowledge of disease and a great breadth of observation.

R. T. Layman, of Cecilian, read a paper entitled "An Undiagnosed Case."

Curran Pope analyzed the symptoms calling attention to the inter-relationship of vertigo, loss of knee jerks, slight static ataxia, sluggish pupil, over-impulsive action of facial muscles and fibrillation of the tongue.

Such combination of symptoms point to incipient paresis. Should have examination of spinal fluid to determine diagnosis, if syphilitic. Mild, early syphilis often productive of late central nervous involvement. Have not so much mental as tabetic symptoms. Treatment should be to have intra venous salvarsan, salvarsanized serum and mercury. Thought iodides injurious. What has been already destroyed will not be restored. Despite failures of Swift Ellis method it should be used provided patient thoroughly understands its limitations. These cases may terminate in sudden death due to sudden rupture of a large vessel. Patients should have heroic treatment.

C. Z. Aud asked why man improved on eating. Was case one of auto-intoxication?

Curran Pope thought toxemia simply aggravated a mental condition.

W. E. Gardner agreed with Dr. Pope and thought spinal fluid would show positive Wasserman. Agreed also that taboparetic cases were getting more frequent. Thought Swift Ellis treatment should be given. Reported case of great improvement by this treatment. Thought best we could expect was an arrest of symptoms but patient should have benefit of treatment.

H. J. Farbach spoke of cases of atypical syphilis resulting in cerebral types. Long, thin, kinky spirochaete seem to have predilection for nervous system and these often develop early.

Treatment. Early cases with tremor may by active treatment be restored. In the case under discussion treatment should be started not only as stated above but also for his general condition: build up his general system. Thought intra-spinal treatment always of benefit even if it did not result in complete cure.

C. Z. And announced that the hour for dinner had arrived. Suggested that discussion be resumed after dinner. Wished to announce that after regular course at the University of Louisville the school offered a free course on fractures and dislocations to all who would accept it and he hoped that many would take advantage of it.

The society reconvened after dinner at 1:30 P. M.

W. A. Bolling, of Louisville, gave an illustrated lecture on the commercial production of anti-toxin.

H. J. Farbach, of Louisville, read a paper on the Practical Side of Vaccine Therapy.

On motion of **Curran Pope**, the discussion was resumed on Dr. Layman's case.

R. T. Layman said he would like to hear from some of the other speakers, particularly Dr. And.

C. Z. And stated he had known the family intimately for years and was loath to believe a specific history but as innocent persons might be infected he thought the tests should be made.

R. T. Layman said the tests would be made.

C. T. Riggs related a case similar to Dr. Layman's who later developed epileptic attacks.

In answer to a question Dr. Layman said there was no aura.

D. W. Gaddie also related a case of epilepsy that had started as Dr. Layman's case had.

Curran Pope said that epilepsy was not a disease but a symptom and that there were various types and causes for the manifestations. Some cases were due to reversion to primitive savage type. Such cases should be submitted to psychoanalysis and re-educated. Other types were of traumatic or syphilitic origin. The usual drug treatment was not a cure in any sense but simply dulled the sensorium so that it did not respond; in effect an anaesthesia.

Discussing Dr. Farbach's paper he was greatly interested in its conclusions. Thought this work after method of Alberhalden would completely revolutionize diagnosis in cases of pregnancy, cancer, dementia praecox. He was proud

of the work accomplished, by the men in the regular school of medicine and thought their achievements worthy to be classed with the achievements of any other body of workers.

P. F. Barbour discussing papers of Drs. Bolling and Farbach hoped with Dr. Pope that these methods would eventually result in greater accuracy in diagnosis. Thought we were but on the edge of vaccine therapy. Opinions were still fallible. Thought cases of food poisoning in lesions of gut walls were similar to poisoning resulting from injection of foreign proteid in blood.

C. Z. And said that Dr. Bolling's paper was a great object lesson from a sanitary standpoint showing great advance in methods since the time when he was a student.

The Society was favored with a visit by our well known vital statistician, Dr. W. Lucien Heizer, who addressed the society on a very pertinent subject but with his usual modesty requested that the secretary take no notes of his remarks.

Following this the discussion took on a general character, partly on papers read and partly on Dr. Heizer's remarks.

If the reader notes an absence of remarks in the discussion such as "I desire to compliment the doctor on his excellent paper" or "I listened with great interest to the masterful address of the essayist but" or "I think the paper both timely and good" he mustn't think the social amenities are dispensed with at Muldragh but simply remember that the Secretary is not a stenographer and can but hope to abstract in part what he considers the essence of a discussion.

After a lengthy discussion enjoyed by all and a full meeting the society finally adjourned at 4 P. M. to meet again in August.

GAYLORD C. HALL, Secretary.

Pendleton—The Pendleton County Medical Society met at the Day House, in Falmouth, on Wednesday, April 14-15, with the following members present: Blackerby, Blades, Chipman, Clark, Cram, Daugherty, Eekler, Ellis, Hopkins, Kendall, McKenney, John E. Wilson, J. Ed Wilson, Woolery, Mot Applegate, assistant to Dr. Paul of Cincinnati, was visiting, and exhibited some very interesting X-ray pictures, which was appreciated by the members of the society.

N. B. Chipman and K. B. Woolery paid their dues to the society, for this year.

None of the essayists were prepared, so we had no papers at this meeting.

After enjoying the X-ray plates of Dr. Applegate we had a splendid report of clinical cases.

The society then adjourned.

W. A. McKENNEY, Secretary.

Pendleton—The Pendleton County Medical Society met at the Day House in Falmouth, Ky.

on Wednesday, May 12, 1915, with the following members present: Drs. Beckett, Blackerby, Blades, Brown, Chipman, Clark, Cram, Daugherty, Ellis, Hopkins, Kendall, McKenney, Nichols, John E. Wilson, J. Ed Wilson, Woolery, C. T. Souther, a surgeon of Cincinnati. A specialist on local anaesthesia was present and delivered a most excellent address on this subject, which was greatly appreciated by all present.

C. H. Kendall read a paper on "Tabes Dorsalis," which was well received.

J. M. Blades read a paper on "Placenta Previa," which was also enjoyed by all members present.

This was the best meeting we have had this year, and was thoroughly enjoyed. Every member of the society being present but two, and all entered into the spirit of the meeting.

W. A. McKENNEY, Secretary.

Rowan—The Rowan County Medical Society met at the City Hall on the second day of April, 1915. The following members being present, T. A. E. Evans, Y. M. Thomas, A. L. Blair, A. Seaggs, J. Wilson and G. C. Nickell.

The meeting was called to order by the president, Y. M. Thomas, and upon motion of A. L. Blair and seconded by G. C. Nickell that the members present proceed at once to reorganize. This motion received the unanimous vote of all present. The Chairman having declared nominations now in order whereupon A. Seaggs nominated A. L. Blair for president, and seconded by T. A. E. Evans. There being no other nominations, Dr. Blair was elected by acclamation.

Upon motion of A. Seaggs and seconded by J. Wilson, T. A. E. Evans was nominated for Vice President. There being no other nominations, Dr. Evans was elected by acclamation.

Upon motion of J. Wilson and seconded by T. A. E. Evans, G. C. Nickell was nominated for Secretary. There being no other nominations, Dr. Nickell was elected by unanimous vote.

Upon motion of T. A. E. Evans, A. Seaggs was nominated as Delegate to Kentucky State Medical Association. No other nominations and Dr. Seaggs was unanimously elected.

Upon motion of J. Wilson and seconded by Dr. G. C. Nickell, Dr. Fred Blair was accepted as a member of the Rowan County Medical Society by a unanimous vote.

The President appointed J. Wilson, Y. M. Thomas and A. Seaggs as Censors.

After a brief talk by President Blair, the society adjourned to meet on the fourth Tuesday April 27, 1915, at the City Hall.

G. C. NICKELL, Secretary.

Russell—The regular meeting of the Russell County Medical Society was held in the parlors of the Holt Hotel, Jamestown, May 1st

The President, L. D. Hammond, called the society to order promptly at 9:30 A. M. After

reading and adopting the minutes of last meeting and dispensing with unfinished business, the roll was called and the following doctors answered to their names: Hammond, Flannagan, Blair, Rowe, Scholl.

L. D. Hammond reported a case of "Puerperal Infection" with death of the case, which was discussed at length by all the members present.

L. D. Hammond reported a case of "Vomiting in Pregnancy and Puerperal Infection." Case recovered.

W. G. D. Flannagan reported a case of "Acute Dysentery." Discussed by all present.

W. G. D. Flannagan also reported a case he had on hand at present of "Vomiting in Pregnancy." He had tried all the usual remedies but case gets no better. All the doctors present seemed interested and offered suggestions to help him in the case.

This is three cases of vomiting in pregnancy reported at this meeting. This is the most cases of the kind ever reported at our society, hence most of the time was taken up discussing dysentery and vomiting in pregnancy. Also the question was asked who was an active member of a county society which was answered by several of the doctors.

Paying of dues alone does not constitute an active member, but paying dues and attending of at least 80 per cent of the meetings and working for a good society between times was decided to be an active member.

Also if a doctor is sick or some of his family and he cannot attend but pays his dues and works and speaks a good word for the society and does all he can for the good and welfare of the society, was decided to be another class of active members.

Some of the doctors present said that they believed that there were doctors in the world who just joined a society and paid his dues simply to have it to say that he is a member in good standing of such and such a society and to get the benefits of the society's recommendation when it is necessary for him to have the same. Such doctors always seem busy and hardly or never attend a society meeting. This kind of members don't aid in the great work of the medical societies.

After arranging the program for the next meeting, to be held at Russell Springs, June 5, at 9:00 A. M., the society adjourned.

The following is the program:

Call to order by the President at 9:00 A. M.

Prayer.

Reading of Minutes of last meeting.

Unfinished business.

Election of members.

Clinic hour.

"Diet of Child One to Five Years of Age,"—J. I. McClendon.

"Prevention of Disease"—M. M. Laurence.

"Smallpox"—J. M. Blair.

Paper, his own selection.—L. D. Hammond.
 Paper, his own selection.—W. G. D. Flannagan.
 "Summer Diarrhoea"—J. S. Rowe.
 "Typhoid"—J. B. Tartar.

Paper, his own selection.—A. W. Cain, Councilor.

It is to be hoped and earnestly requested that all be there on time when the President calls the meeting to order.

J. B. SCHOLL, Secretary.

BOOK REVIEWS

The Parasitic Amoebae of Man by Charles F. Craig, M. D. Published by J. B. Lippincott Co., Philadelphia. Price, \$2.50. This book contains a detailed description of the various species of amoebae which have been described as parasitic in man, especially as regards morphology, life cycle, methods of differentiation, and relation to disease, and includes everything of value resulting from the investigation of these interesting and important parasites.

Serology of Nervous and Mental Diseases by D. M. Kaplan, M. D., Director of Clinical and Research Laboratories of the Neurological Institute, New York City. Published by W. B. Saunders Co., Philadelphia. Price \$3.50 net. It is a book of 316 pages, illustrated, divided into four parts. Part I treats of the general consideration of the spinal fluid and serology. Part II treats of the serology of nervous and mental diseases of non-infective etiology. Part III treats of serology of nervous and mental diseases of lentic origin. Part IV treats of the therapeutic use of salvarsan.

Diseases of the Nose and Throat by D. Braden Kyle, A. M., M. D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Price \$4.50 net. In presenting the fifth revised edition of this work, as in previous editions, the same general plan and arrangements have been adhered to. The entire book has been thoroughly revised. The following new articles have been added: Vaccine Therapy, Lactic Bacteriotherapy in Atrophic Rhinitis; Salvarsan in the Treatment of Syphilis of the Upper Respiratory Tract; Sphenopalatine Ganglia Neuralgia; Negative Air-pressure in Accessory Sinus Disease; Chronic Hyperplastic Ethmoiditis; Congenital Insufficiency of the Palate; Lactic Bacteriotherapy in Pharyngeal Affections; and an article describing the Removal of a Plate of Artificial Teeth from the Esophagus. A number of new illustrations have been added.

Fever, Its Thermotaxis and Metabolism by Isaac Ott. Published by Paul B. Hoeber, 67-69 E. 59th St., New York. Price \$1.50 net. This book consists of three lectures delivered before the Sophomore Class of the Medico-Chirurgical Col-

lege. It is a book of unusual importance in the practice of medicine, the author having devoted forty-five years to the study of this subject.

Infection, Immunity and Specific Therapy by John A. Kolmer, M. D., Dr. P. H., Instructor of Experimental Pathology, University of Pennsylvania. Published by W. B. Saunders Co., Philadelphia. Price, cloth \$6.00; half morocco, \$7.50 net. This book is made up of five parts. Part I, treats of General Immunologic Technic. Part II, treats of the Principles of Infection. Part III, treats of Principles of Immunity and Special Immunologic Technic. Part IV, Applied Immunity in the Prophylaxis, Diagnosis and Treatment of Disease—Specific Therapy. Part V, deals with Experimental Infection and Immunity. It is a splendid book and will be a valuable addition to the library of physicians.

Cancer, Its Cause and Treatment by L. Duncan Bulkley, A. M., M. D. Published by Paul B. Hoeber, Medical Publisher, 67-69 East 59th St., New York. Price \$1.50 net. Considerable attention has been paid to the medical aspects of cancer in this book. The investigators and practitioners along these lines have been innumerable, the work done prodigious, and the literature relating thereto enormous, but relatively little attention has been paid to the medical aspect to this most threatening malady. This book treats of the nature of cancer, frequency and geographical distribution of cancer, metabolism of cancer, relation of diet to cancer, and medical treatment of cancer.

A Compend of Obstetrics by Henry G. Landis, A. M., M. D. Published by P. Blakiston's Son & Co., Philadelphia. In this ninth edition of Landis Compend the editor has made a number of changes, both in arrangement of the book and in addition of considerable new material. This is one of the best series of manuals for the use of students, and most students and practitioners are familiar with it, and need no introduction as to its practicability.

Nervous and Mental Diseases by Archibald Church, M. D., Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago; and Frederick Peterson, M. D., formerly Professor of Psychiatry, Columbia University. Published by W. B. Saunders Co., Philadelphia. Price, Cloth \$5.00 net; Half Morocco, \$6.50 net. This book is the eighth edition of this standard work. Only a few material changes have been made. The subject of vertigo, infantile paralysis, syphilis of the nervous system have been reviewed and so changed as to bring them up to the present, because of the advances made in them. References to the new investigations of spinal fluid and its relation to the various diseases of the brain and the spinal cord

have been introduced, as well as certain knowledge of the relation of the glands of internal secretion to nervous disorder. It is a carefully prepared text book and is a standard of its kind.

Medical Electricity and Rontgen Rays and Radium by Sinclair Tousey, A. M., M. D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Published by W. B. Saunders Co., Philadelphia. Price, Cloth \$7.50 net; Half Morocco, \$9.00 net. Second edition, thoroughly revised and enlarged with 1219 pages with 798 terpaical illustrations, 16 in colors. The rapid progress made in the electro-therapeutics necessitates a readjustment of this work. So many of our practitioners have equipped themselves with the X-ray and other therapeutical devices that the announcements of this second edition will be of interest. It will be seen that the subject is completely and thoroughly handled. Among other chapters of interest, there are those dealing with Static and Dynamic Electricity, Electropathology, Ionic Medication by Electrolysis, High-Frequency Currents, The X-ray, Roentgenotherapy, and Radium.

Differential Diagnosis, Volume II by Richard C. Cabot, M. D., Assistant Professor of Clinical Medicine, Harvard Medical School. Published by W. B. Saunders Company, Philadelphia. Price, Cloth \$5.50; Half Morocco, \$7.00. This is a book of 709 pages and 254 illustrations. Volume I dealt with the symptom pain, and with eleven other common symptoms. In this volume, nineteen other symptoms have been selected, analyzed and illustrated. Among these, Abdominal and other tumors, Vertigo, Diarrhea, Dyspepsia, Hematemesis, Glands, Swelling of the Face, Fainting, Hoarseness, Pallor and Delirium are prominent ones. The case reports are graphically presented and the subject matter is extremely interesting. It seems to the writer that this method of diagnosis is a logical one for the symptoms are the most noticeable danger marks of a patient and the grouping of the cases of these symptoms lead one along the right line of differentiation so that the real causes of diseases will be evident. To those who purchased the first book, Volume II will be eagerly secured.

Diabetes Mellitus by Nellis B. Foster, M. D. Published by J. B. Lippincott Co., Philadelphia. Out of the enormous literature on this subject, there is condensed in this volume a critical presentation of the evidence as it exists at present. Some of the prominent chapters are Normal Metabolism, Experimental Glycosuria, Acidosis, Pathogenesis, Renal Diabetes, Diagnosis and Course of the Disease, Total Metabolism in Diabetes, Treatment, and Identification of Sugars in Urine.

Cystoscopy and Urethroscopy by Lewis and

Mark. Published by P. Blakiston's Son & Co., Philadelphia, Price \$4.50. This book contains 229 pages. It is beautifully illustrated and well printed upon book enamel paper. It is an entirely practical book for general practitioners because the subject matter really teaches and the pictures really show how to do some important technique. While no large share of the book is devoted to historical considerations, certain features and events are made clear that have been the subject of confusion and error in genito-urinary literature.

International Clinics, Volumes I and IV. Published by J. B. Lippincott Co., Philadelphia. Price \$2.00 each. Volume I, Twenty-fifth Series, presents among many other valuable chapters, Ementine in the Treatment of Amoebic Dysentery, Routine of Practical Vaccine Therapy, The Treatment of Malignant Tumors with Electrical Methods, The Early Diagnosis of General Paralysis, Autoplastic Bone Transplantation, and Medical Economics. This book is a valuable addition to the series.

Volume IV contains among its many interesting chapters The Therapeutic Value of Water in Pneumonia, Semi-Narcosis in Obstetrics, Home and Office Treatment of Inebriety, Routine Administration of Ether in Measured Dosage, Expert Testimony, and Performing Operation without consent.

Principles of Hygiene by D. H. Bergy, M. D., First Assistant, Laboratory of Hygiene and Assistant Professor of Bacteriology, University of Pennsylvania. Published by W. B. Saunders Co., Philadelphia. Price \$3.00. This is the fifth edition of this popular work. It deals in an exhaustive manner with the subjects of hygiene as to air and ventilation, water and water supply, garbage and sewage disposal, exercise, clothing, personal, industrial, school, military and naval hygiene, habitations, disinfection, quarantine, vital statistics, etc. This book has 531 pages with illustrations.

The Tuberculosis Nurse, Her Functions and Her Qualifications by Ellen N. La Motte, Registered Nurse. Published by G. P. Putnam's Sons, New York. This is a book written for tuberculosis workers with detailed directions as to the beginning of this work, and the relations to the doctor, the work of the dispensary, taking the patient's history, the bedridden patient, sterilization, etc. This is a practical hand book for the one who proposes to engage in this work.

Volume I of 1915 Year Book is edited by Frank Billings, M. S., M. D., and J. H. Salisbury, A. M., M. D. Published by the Year Book Publishing Co., Chicago, 327 S. LaSalle St. Price \$1.50. This book takes up the infectious diseases, diseases of the lungs, of the heart, of the arteries,

of the blood and blood making organs, of the ductless glands, and of the kidneys. It is up to the usual high standard of this series.

Year Books—1914—Volumes VII, VIII and X Published by the Year Book Publishing Company, Chicago.

Volume VII deals with obstetrics and the subjects of pregnancy, labor, the puerperium, and the new born; and deals with it in a practical way. Price \$1.35.

Volume VIII deals with *Materia Medica* and Therapeutics, Preventive Medicine and Climatology. We have Part I devoted to Drugs; Part II, to Extracts of Animal Organs, Serums and Vaccines; Part III, to Electricity in its various forms. Under the head of Preventive Medicines it deals with the infectious diseases, industrial and social diseases, general sanitation and eugenics. Price \$1.50.

Volume X on Nervous and Mental Diseases. It contains chapters on the Neuroses, Diseases of the Meninges, Syphilitic Diseases of the Nervous System, Diseases of the Brain and Spinal Cord and Peripheral Nerves. Price \$1.35.

Preventive Medicine and Hygiene by Milton J. Roseau. Published by D. Appleton and Company, New York. This is a book of health laws and rules. Not only does it tell how to prevent infectious diseases, but how to manage them and keep them from spreading. Some of its chapters are on sewage and garbage, vital statistics, and schools. It describes the care of the patient while ill, and the care during the infectious stage. There can be no doubt that this is one of the most important books published to-day.

Scopolamine-Morphine Anaesthesia by Bertha Van Hoosen, M. A., M. D. Published by the House of Manz, Chicago. This book of 200 pages is attractive in appearance, beautifully illustrated and contains some interesting reading matter. So much has been said and printed about the "Twilight Sleep" that doubtless a book of this sort will be rather widely read. Ever since the fall of Adam and Eve, there have been attempted more or less successful, more or less dangerous methods to escape the pains of childbirth. The fad now in vogue and talked about very much and praised very highly in the scopolamine-morphine anaesthesia. A perusal of this book would doubtless give one the desire to join the ranks of the faddists who cater to the cry of public opinion, usually based on hearsay and slight medical knowledge; and in a few years from now, it seems but safe to say, that the future use in the ordinary homes will be discontinued because experience will justify the impracticability of using it.

Diagnostic and Therapeutic Technic.—A manual of Practical Procedures Employed in Diag-

nosis and Treatment. By Albert S. Morrow, M. D., Clinical Professor of Surgery, New York Polyclinic. Second edition, Thoroughly Revised. Octavo of 834 pages, with 860 illustrations. Philadelphia and London: 1915. Cloth, \$5.00 net; Half Morocco \$6.50 net. W. B. Saunders Company, Philadelphia, London.

This second edition takes up the later technique in diagnosis and therapeutics and contains all of the best that was in the first edition. To the busy doctor, this book will be of special value because it is full of valuable, practical suggestions that can be applied in every day's work. Methods of anesthesia, intravenous infusion, hypodermic and intra-muscular injections, exploratory punctures and aspirations, transilluminations and douches, laryngoscopy and tracheoscopy intubations, curettage are some of the subjects which are succinctly treated.

The Social Status of Medical Practice.—In an address before the graduating class of St. Louis University, June 1, 1914, E. P. Lyon, Minneapolis, (Journal A. M. A., Dec. 19, 1914), dwells on the importance of the physician adjusting his ideals and his career in accordance with the altruistic rather than the egotistic motives. In a certain sense the profession of medicine is a business proposition. It is the inevitable result of the altruistic positions of the present day that the physician must become less and less the seller of healing and more a captain of health. The public health campaigns at the present day show this tendency, but he believes that still too few physicians are accurately informed on matters of public health or capable of guiding the public in these matters as they should. He recommends a book by Richard C. Cabot on Social Service and the Art of Healing as specially suitable for medical graduate reading. We must cure people so they will stay cured, and we must therefore, not fail to look at the social background and join hands with the expert who diagnoses and treats the ills of environment and state. The matters of public health and service are important cooperative enterprises in which every doctor should take part. There should also be cooperation between physicians in their special lines, and he holds that physicians are apt to take too narrow views in regard to the cooperative associations of their patients, which include also medical services in their programs, and points out the recent experiences with the insurance laws abroad, which, instead of crippling the profession, have appreciably increased the average compensation of the physician. Of course, the question of medical experts or specialists arises; when one or many are required, how the services of such are to be met in this general plan of cooperation, and he sees its solution in combinations of experts in which the sick man becomes the patient of the group which renders the service needed for a single charge.

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EDITORIAL.

CANCER.

Co-operating with the Cancer Prevention Society of the Pennsylvania State Medical Association, this issue of the JOURNAL is especially devoted to the consideration of the cancer problem with a special view to the prevention of the usual end results of this disease. It is now well recognized that there is a pre-cancerous state in the development of practically all malignant growths, which if taken in time can be treated effectively. Remove all the warts and moles and superficial benign growths, as routine matter, on every patient who comes into the office, particularly if they are about the lips or on the face or neck or about the breasts. Make a careful examination of every woman immediately after labor, repair lacerations of the cervix and perineum, or if they come to you later, do or have done the secondary repair. Remember that bleeding is never a symptom of the change of life but is always a symptom of disease, usually cancer. Remember that blood in the stools and ulceration in the rectum is practically always malignant and can be cured only in the early stages. Many other most important matters are brought to your attention in the scientific editorials in this issue and we trust every thoughtful physician will read everyone of these splendid and especially prepared editorials. The JOURNAL takes great pride in presenting them.

THE PROGRAM.

The attention of the membership is called to the preliminary program for the annual meeting of the Association which will be held in Louisville, September 21, 22 and 23. Dr. W. L. Rodman, President of the American Medical Association, formerly an honored member of this Association, will deliver the annual address and Dr. John B. Murphy, of Chicago, will give a practical demonstration

of the treatment of fractures, using both lantern slides and models in this demonstration. All the rest of the program will be contributed by our own membership. The committee hopes to report the complete program in the next issue with all the subjects properly arranged and classified. The present publication is made so that the members can begin to think along the lines which will be discussed and we will be particularly anxious to have as many of the members as possible write for any papers in which they are interested so they can better enable themselves to take part in the discussion.

Good railroad rates will be secured and everyone can make arrangements for attending the Louisville meeting with the promise that it will be the best one we have ever held both from a scientific and social standpoint.

THE HUNDRED PER CENT CLUB.

The membership all over the State will be interested in the changes in the list of the Hundred Per Cent Club of the State Association. It will be remembered that this consists of those county societies which have reported as many members in good standing as they had last year. Those marked with a star have increased their membership over last year and those marked with two stars have every eligible physician in the county. If your county is not on this list, please look into it and help your county officers to put it in there next month.

*Adair, *Anderson, Ballard, *Boyd, *Boyle, Bracken, *Breathitt, *Breckinridge, *Bullitt, *Carlisle, *Clark, Clay, *Clinton, *Cumberland, Elliott, *Estell, *Fayette, *Fleming, *Floyd, *Fulton, *Gallatin, *Garrard, *Grant, *Graves, Green, Hancock, *Hardin, *Harlan, Harrison, *Henry, Hickman, *Jessamine, *Knox, *Lawrence, Lee, *Leslie, *Lewis, *Lincoln, *Livingston, *Lyon, *McCreary, *McLean, *Madison, *Magoffin, Marion, Martin, *Mason, *Meade,

*Menifee, *Mercer, *Metcalf, Montgomery, Morgan, *Nelson, *Nicholas, *Ohio, Oldham, Owen, *Owsley, *Pendleton, *Perry, *Pike, **Powell, Robertson, **Rockcastle, *Rowan, *Russell, **Scott, *Simpson, *Spencer, **Taylor, *Todd, **Trimble, *Union, Washington, *Whitley, Woodford.

OFFICIAL ANNOUNCEMENTS.

The JOURNAL desires to call the attention of the membership generally to the appointment of the following chairmen of sub-committees of the Committee on Arrangements for the approaching meeting of the Kentucky State Medical Association in Louisville, September 21, 22 and 23, with the House of Delegates meeting on September 20.

Dr. Charles Hibbitt is Chairman of the General Committee on Arrangements; Dr. Charles Lueas, Chairman of the Entertainment Committee; Dr. E. L. Henderson, Chairman of the Finance Committee; Dr. R. Lindsay Ireland, Chairman of the Committee on Transportation and Publicity; Dr. Lee Kahn, Chairman of the Committee on Hotels and Meeting Places, Mrs. Ap Morgan Vance, Chairman of the Ladies' Committee; and Dr. Ap Morgan Vance, President of the Jefferson County Medical Society was made an *ex officio* member of the General Committee on Arrangements.

AN EFFECTIVE OFFICIAL.

For the fourth time Dr. Samuel G. Dixon has been re-appointed Commissioner of Health of Pennsylvania. Under Dr. Dixon's leadership, Pennsylvania has developed probably the most effective health organization in the world. At the present time the Department has between three and four thousand employees, and its activities reach into every precinct in the State.

In the campaign against tuberculosis, which ten years ago was the chief cause of death in Pennsylvania, one hundred and fifteen tuberculosis dispensaries have been established and three great sanatoria have been constructed. The death rate from tuberculosis is steadily declining year by year. Forty thousand cases of typhoid fever with a few over four thousand deaths was the annual toll exacted from Pennsylvania citizens ten years ago. This sick and death rate has been decreased more than seventy-five per cent. During the past year the death rate of 13.9 per thousand was the lowest in the history of the State. More than seventy-eight thousand people are thus shown to be alive in Pennsylvania to-day who would have died had the death rate of 1906 continued.

It is of special interest to know that the people of Pennsylvania through their General

Assembly at its session which adjourned on May 20, appropriated \$4,632,387.00 for public health work in that state for the next two years.

This is a wonderful tribute to a great commonwealth in that it has recognized the practical possibility and value of health work and has paid so splendid a tribute to so efficient an officer.

GRAVES COUNTY.

In the society columns we are publishing a report of the recent meeting of the Graves County Medical Society at Farmington. The JOURNAL feels that it has been a little relaxed in not more frequently calling attention to the excellence of this Society. Dr. Hunt has been the secretary for many years and gives this work the sort of attention that is bound to win. They have a splendid lot of doctors in the county and everyone of them are willing to subordinate their individual feelings for the common good and whenever there is a difference of opinion they thresh it out in the society and arrive at a just conclusion and then to business. Our hats are off to the members of the Graves County Medical Society and especially to its very effective secretary.

THE FRACTURE COURSE.

One of the most creditable things that has ever been undertaken by the Kentucky State Medical Association was the co-operative post-graduate Course in Fractures given under its auspices during the recent commencement week at the University of Louisville. The conception of this course and its successful inauguration are due to the broad view of professional conditions and needs gained through his years of experience as chairman of our Medico-Legal Committee by Dr. John J. Moren, and the practical course provided was due to Dr. Henry E. Tuley, the Dean of the University of Louisville and its effective faculty. Neither Dr. Moren nor Dr. Tuley were completely satisfied with this course. The attendance and the response by the profession of the State as shown in its attendance on the course was far greater than was expected. Next year it is the purpose of both the Association and the University of Louisville to work out a far more practical course that will be a lot more worth while. The JOURNAL is sure it voices the gratitude of everyone who was present, to Drs. Moren and Tuley and their associates and it is with considerable pride that we call the attention of other associations to this new step indicating the practical results that can be brought about by the state societies in improving professional conditions. No better post-graduate course has ever been held than this and no state so-

ciety has ever done more for its membership in the inauguration of this departure from older methods. It is of passing interest that the attendance on this course was more than twice that we used to have at the annual meetings of the Association before its reorganization along democratic lines.

GOOD TEETH ESSENTIAL TO GOOD HEALTH.

The following will be of interest to our readers:

"According to the United States Public Health Service there will be a falling off in the sale of store teeth in the future, and plates and toothless gums will be seen less frequently than formerly. This is due to the epoch-making discovery of the cause and method of treating what is known to the scientist as pyorrhea dentalis and alveolaris and to the layman as Rigg's disease. This is a suppuration around the roots of the teeth and causes an inflammation which produces loosening and loss of the teeth. At one time or another practically everybody has Rigg's disease. It is caused by a minute single celled animal called the endamoeba buccalis. This malevolent parasite does its work in combination with the pus-producing bacteria or germs. The skillful teamwork between these two destroys the delicate membrane which surrounds the roots of the teeth and causes them to fall out.

"The necessity of good teeth in order to have good health has been recognized a long time, but the scientists of our country have only recently worked out the relationship between decay of the teeth and Rigg's disease on the one hand, and rheumatism, serious heart disease and high blood pressure on the other. So firmly have these facts been proven that the modern up-to-date physician begins the treatment of such diseases by an inquiry into the condition of the teeth and their sockets. If these are found to be diseased, the condition is cured before the treatment goes further. The discovery of the cause of Rigg's disease is, therefore, of the very greatest importance.

"Just as soon as the cause of Rigg's disease was found out, the search for the cure began in earnest. It has been previously discovered that the use of ipecac would cure the diseases which are caused by infection of the intestine with endamoeba. From this it was deduced that a similar treatment would cause the destruction of endamoeba in the mouth. This was found to be the case, and emetin, the form of the drug used, is now administered by physicians for the cure and prevention of the disease. It sometimes takes a considerable time to get rid of all of the malignant germs in this way but the results which have been ob-

tained have been remarkably good. The treatment is both local and general.

"In the matter of preventing much disease, it is important that the mouth be cleaned several times a day, and that a dentist be visited frequently to remove tartar and the yellowish matter which accumulates along the inner edges of the teeth and between the teeth. This is particularly important in the case of children, because it has been found that many a child is apparently dull who is in reality suffering from a chronic poisoning produced by a mouth full of decaying teeth."

DAMAGES FOR WATER-BORNE TYPHOID FEVER.

As is well known to the profession and people of Kentucky, the State Board of Health has been taking very active steps toward securing pure water supplies for the various cities and towns in the State for the past several years. Sometimes the public service corporations which supply water have doubtless felt that the Board was perniciously active in interfering with their commercial rights, but we feel sure that in the long run they will find that the Board has been acting in their interest as well as in the public interest. The courts everywhere are inclined to hold that private water companies are responsible for infected water supplies. Special attention is called to the decision rendered this year by the State Supreme Court of New Jersey in an appeal from a verdict of \$750 awarded B. Henry Jones against the Mt. Holly Water Company to recover expenses and loss of time due to the illness of three of the plaintiff's children from typhoid fever or paratyphoid, beginning in January, 1912, during an outbreak of typhoid in Mt. Holly. The plaintiff had paid the Company \$29.50 in advance for a year's water supply, covering the period during which the illness occurred.

The court, in reviewing the testimony and law of the subject, held that there was evidence that the water supply was polluted with sewage and that the company had known of the evidence for three and a half years prior to the epidemic. It also held that there was a contractual duty on the part of the company to supply the plaintiff with pure, wholesome water. Two paragraphs expressing this view may be quoted from the decision as follows:

"It must be borne in mind that the defendant company was in the water-supply business for profit. The plaintiff had paid for the supply which he was to receive in advance. Hence, it became the duty of the defendant company to give the plaintiff water fit for domestic purposes, including fitness for drinking.

Water is a necessity of life and one who undertakes to trade in it and supply customers stands in no different position to those with whom he deals than does a dealer in food stuffs. He is bound to use reasonable care that whatever is supplied for food or drink shall be ordinarily and reasonably pure and wholesome."

The court cites with approval a clause in the contract which provides that the water delivered to the city shall be pure and wholesome and free from pollution for drinking and domestic purposes. The court also cites with approval a declaration "that pure and wholesome water necessarily means such as is reasonably free from bacteria and coli, or any other infection or contamination which renders water unfit for domestic use and unsafe and dangerous to individuals." Moreover, it was necessary for the plaintiff to do no more than make it "reasonably appear that the drinking water was the probable efficient cause of the typhoid fever."

Water-borne typhoid fever should not occur in cities and towns with a public water supply. If it does, it is due to negligence on the part of the company supplying it and the State Board of Health is glad to assist either the public or the company in the prevention of this disease.

THE HAZELWOOD SANITARIUM.

The Hazelwood Sanitarium has been opened since April first. It will be remembered by the profession of the State that this Institution is conducted by the Louisville Anti-Tuberculosis Association. Letters addressed to it at Station E. R. F. D. No. 2, Louisville, Kentucky, will receive prompt attention. Special arrangements have been made for persons with incipient tuberculosis who are in moderate circumstances, at this splendid Institution. It is in charge of Dr. O. O. Miller, recently of Asheville, North Carolina. An experienced physician is in charge of the Sanitarium and our members are urged to visit it or correspond with him whenever they are called upon to visit patients in regard to sanitarium treatment for tuberculosis.

Gas Gangrene in War.—The worst septic complication of wounds that has been seen frequently during the present war is the so-called gas gangrene. There are a series of forms of this, and not all the cases are by any means necessarily identical with acute emphysematous gangrene. The cases as a rule begin as a cellulitis with much gas formation and rapid sloughing of tissues, and then gangrene eventually develops, running a rapid course. It is not always the same organism. Pus is not produced in the early stages, but only sloughing and gas formation.

SCIENTIFIC EDITORIALS.

SKIN CANCER: ITS PREVENTION AND TREATMENT.

The dictum of Ansterlitz concerning psoriasis can be applied to cancer: "What cancer is, no man knows." For, while a great amount of clinical experience and scientific research has in the course of time put us in possession of a number of facts bearing upon the mode of origin of malignant growths, no plausible theory can be found that agrees with all that we know and that is not refuted by other facts to account for the cause of cancer. Yet, while no satisfactory theory has yet been advanced, sufficient is known to prove that the disease is not of a parasitic nature. The supporters of the parasitic theory argue that proliferation of cancer cells is, in a way, as foreign to the adjacent normal cells as a bacterial or protozoal parasite would be. From time to time there has even been claims made that a definite parasite cause of cancer has been discovered, but such claims have never received general acceptance, since further investigation has failed to verify them, or the discovered bodies have been proved to be harmless or unimportant. In recent publications Cantamine and Bose have stated that they believe they have discovered a protozoal cause of cancer, which can be cultured and transplanted. However, after following up the work done along this line, we have not been convinced that they have been successful. A strong argument against the parasitic nature of the disease is the fact that epitheliomata often develops after exposure to sunlight, X-rays, radium, and chemical and mechanical irritation. Moreover persons living with or in attendance on cancer patients do not develop the disease more frequently than others.

To prevent cancer or to treat it after it has started one must be well-posted on the pathology and histology of pre-cancerous phenomena, as well as able to recognize all the different forms of malignant tumors. It is largely on the ability to detect the pre-cancerous stage that our hopes of prevention or cure at an early stage depends. Even the smallest and least malignant of cancers will in time become inoperable and hopeless, if effective treatment is not instituted, while in other forms a few weeks delay may mean that the death-warrant has been signed. Early diagnosis and early treatment is the key-note in our fight with cancer. In skin-cancers especially should an early diagnosis be made, since the lesion is visible, and can be studied much more easily than cancer of the internal organs.

Three distinct phases make their appear-

ance in skin-cancer, and it is upon the recognition of these phases that the prognosis must be made. If the recognition is made early in the course of the disease the prognosis is good and the treatment is simple, but if not made until later the prognosis is bad and the treatment is difficult and often useless. Therefore a clear understanding of the pathology of skin-cancers, the rapid changes and the peculiar characteristics, are of the greatest importance. The three phases that are met with in skin-cancers can be classified as follows:

I. True scirrhus carcinoma, often secondary to carcinoma of other organs, more especially of the female breast; easily recognizable;

II. Superficial epithelioma or rodent ulcer, usually begins as a small papule which grows slowly into the characteristic ulcer;

III. Deeply infiltrated epithelioma, beginning as one or more deeply-seated hard tubercles, changing into a crateriform ulcer.

Since the success of prevention and treatment of skin cancer depends upon the recognition of its precancerous state, we must always bear in mind that prolonged irritation of seborrhic localities may provoke epithelial neoplasms or cancer. These precancerous influences may be brought about by congenital or hereditary conditions, inflammatory changes, whether by chemical or mechanical irritation, or by actinic influence or even old age. Different types of naevi, small tumors, moles and warts are prone to become cancers. Particularly dangerous are the pigmented naevi, which when injured by knife or razor, may turn malignant, and often cause metastases in the neighboring glands in the form of melano-carcinomata. These pigmented naevi disappear quickly after being thoroughly cauterized. Certain dermatoses are at times inclined to take on a malignant character, as we see in stubborn cases of psoriasis where too much arsenic has been administered promiscuously, thereby causing a keratotic condition. Benign cystic epitheliomas and particularly, xeroderma pigmentosum Kaposi may often assume a malignant type. Chronic inflammatory processes, such as lupus vulgaris and lupus erythematosus, eczemas, burns, old syphilitic sores (particularly about the nose and mouth), scars, leukoplakias of the tongue and mouth, chronic inflammation of the glands, and other pathological conditions may suddenly assume malignancy.

That trauma, whether mechanical or chemical, has been a very important factor in producing cancerous processes, and that this fact alone speaks against parasitic origin of cancer, is vouched for by many prominent authorities. Pipe and cigar smokers, betelnut and tobacco chewers, chimney sweeps,

sailors exposed to the sun and wind, X-ray operators and workers in tar and paraffin products often suffer from cancer. The sharp edge of a broken tooth may be the cause of a cancer. According to Neve, of 1189 cases of epithelioma, 848 of them were of the thighs and abdomen, and resulted from friction by the kangri, a portable fire-box, used by the natives. Tattooing and scarring of the cheeks with a sharp instrument as practiced by African women also cause many cancers.

Since no single aetiological factor can account for development of cancer, we must always be on the lookout for pathological conditions of the skin. To prevent and to treat cancer we must eradicate the precancerous changes noticed in the skin. Where practicable thorough cauterization (actual or electric) curettage with or without subsequent cauterization, and application of massive doses of X-ray. Where these are inadvisable the knife seems at present the most hopeful remedy we have at our command.

Radium therapy, which was revived two years ago, has been found wanting. Some of its enthusiastic followers made unusual claims, but statistics have shown different results.

Of the newest therapeutic measures injection of benzol is highly recommended by Geza Kiralyfi. The injections of benzol in quantities of 0.1-0.5 in the tumor leads to destruction of cancer cells; a necrotic place is formed which increases from day to day until the whole tumor is sloughed out. These injections, according to Kiralyfi, improves the general health. The only drawback, it is only a purely local remedy and does not penetrate deep enough and absorb all the cancer nodules and cells.

We have not tried this remedy, as it is not so active as other well-tried agents. It would be better to leave a malignant growth alone than to subject it to irritation by unknown remedies.

M. L. RAVITCH.

W. W. Bissell and E. R. Le Count, Chicago, (Journal A. M. A., March 27, 1915), give a study illustrated by charts, of 200 cases of fatal coma or semi-consciousness in the Cook County Hospital during a period of about three and one-half years. Brief accounts are given of the cases correctly and incorrectly diagnosed as uremia. The list of cases analyzed is, as they say, imperfect as not including some of the coma cases which offered no problem, the explanation being well verified accounts of morphine poisoning, illuminating gas poisoning, etc.

THE OBSTETRICAL SIDE OF THE CANCER QUESTION.

That there is an obstetrical side to the cancer question will at once become evident, when it is stated that fully one-third of all cancers in women begin in the cervix uteri. Furthermore that 98 per cent. of such cases are found in women that have borne children, the condition being found most frequent in those having given birth to four or more.

There seems to be no question as to the reason. The disease in such patients is always found in the sensitive irritated tissue around the scar of an old laceration of the cervix. It is well known that the cervix is lacerated more or less in every labor. The writer has been astounded at times when examining patients with a vaginal speculum, months after a delivery to find the amount of deformity present in a cervix, when the delivery was normal and no complications, the dilation of the cervix having been accomplished by the elastic bag of waters. How extensive then must be the damage done when in a dry labor the hard bony surface of the occiput must do the stretching of the cervix or if the forceps drag the head through a partly dilated os.

We have no knowledge of the amount of damage done to the cervix in labor because it is against custom to investigate unless profuse hemorrhage at the time compels us. About ten years ago in a discussion of an obstetrical paper at the meeting of the Kentucky State Medical Association, Dr. A. T. McCormack made the astounding statement that the cervix should be inspected through a speculum at the end of every labor. He was roundly abused by every obstetrician present for advocating such a dangerous practice. The writer believes that it would be the proper procedure now and if the surroundings are too unsanitary for such a procedure then the people should be educated into making them so, or having such deliveries conducted in well regulated hospitals. The result would be that extensive tears of the cervix discovered in this way would be sutured immediately, a procedure that if done aseptically should be as safe as an immediate perineorrhaphy. After forceps operations and other operative procedures where the patient is necessarily under general anesthetic it should be easy to perform this little additional operation. That this single innovation would be a great step in the prevention of cases of cancer, as it would do away with the badly lacerated and scarred cervixes that we see so frequently at this present day, should be evident to everyone. The time honored precept that it is dangerous to invade this region immediately after labor, for fear of introducing infection, is obsolete, with our

present knowledge of the principles upon which infection depends, we should be able to prevent it.

The obstetrician has a well-known duty towards those of his patients who have borne a number of children and have badly scarred cervixes. They should be advised under all circumstances to have the lacerations repaired or the cervix amputated before the onset of the menopause.

When the cancer is first discovered in a woman who is pregnant then the conduct of the case depends largely upon the period of gestation. It must be remembered, that the hyperemia and softening of the tissues due to the pregnancy produces a rapid spread of the cancerous disease, consequently, if the condition is discovered in the early months of pregnancy and the case seems still favorable for operation, then a complete hysterectomy should be done at once removing the uterus with the conception unopened. If gestation has advanced too far and the condition is unoperable, then there is nothing left to do but await the time of delivery.

Formerly the patient was allowed to advance in labor in the hope that delivery might take place through the natural passages in spite of the cancer. At present the consensus of opinion is in favor of an elective Cæsarian section near the expected time of delivery, as offering both the mother and the child the best prognosis. EDWARD SPEIDEL.

CANCER OF THE DIGESTIVE TRACT— THE MODERN DIAGNOSIS AND TREATMENT.

In no department of cancer research has there been more valuable aid rendered in the diagnosis than that afforded by the Roentgen examination of the digestive tract after the introduction of a bismuth meal. As long as the cause of cancer is unknown, the best we can offer by medicine or surgery is the early recognition of the disease by every possible aid in diagnosis and its prompt removal by surgery.

Carman even claims to be able by the X-ray examination to diagnose 93 per cent. of all cases of cancer of the stomach, and if these statistics prove to be correct in the hands of other observers, it is certainly the greatest step in advance that has been made in cancer research. The trend of thought in recent years seems to be along the line of determining what we call the *pre-cancer stage* of the disease, and in this way recognizing a condition which if treated, will prevent a change from benign to malignant pathology.

The early recognition of gastric ulcer is not only of value for the immediate relief of the present distressing symptoms and the great

risk of acute perforation, but also of that lurking danger of a cancer formation on the old, chronic ulcer base.

After much careful research Wilson and MacCarty examining hundreds of specimens furnished by the Mayo clinic, have established that 71 per cent. of chronic ulcers of the stomach present lesions of cancerous development. Fortunately the X-ray can locate from 50 to 60 per cent. of our gastric and duodenal ulcers, and these if treated early will lower the cancer percentage.

According to Carman: "The radiological signs of carcinoma of the stomach I would arrange in the order of their relative importance as follows:

1. Filling defects.
2. Altered pyloric function: (a) Gaping at the pylorus; (b) Obstruction of the pylorus.
3. Advanced position of the six-hour meal.
4. Absence of peristalsis from involved areas of the wall of the stomach.
5. Diminished mobility; loss of flexibility.
6. Diminution in size of the stomach.
7. Antiperistalsis.

The filling defect is a sign of cardinal import and practically indispensable in the Roentgen-ray diagnosis of carcinoma. It is occasioned by the projection of the tumor mass into the lumen of the stomach, and when filled with bismuth the visualized contour of the gastric lumen shows a corresponding irregularity. Obviously, filling defects vary in size according to the extent of the involvement.

They also vary in appearance somewhat, according to the character of the cancer."

It is a well recognized fact that medicine can offer little to aid in the treatment of cancer of the stomach and the mortality from such conditions must always be 100 per cent., as patients treated medically rarely live a year after definite symptoms have developed. The operative mortality in resection is estimated from 9 to 11 per cent.

As Graham has well said: "The two factors alone (prolongation of life and relief of distressing symptoms) are sufficient reasons for the adoption of reasonable surgical procedures, even if we had no cures. But we do have cures. Any promise of relief is better than inaction, and the surgeon can promise a reasonable degree of relief from suffering or at least in many cases a reduction of suffering. In other cases he can go much further and assure the patient of weeks, months or years of coveted life, and occasionally of a permanent cure. There is a prospect of a five year cure in about 25 per cent. of the cases and a three year cure in 41 per cent. (Mayo)."

There has been much hesitation on the part of surgeons to perform this operation for the

reason, in the first place, that if not done with exceptional skill, it has been accompanied by a high mortality in a class of patients who are usually not good surgical risks; and secondly, because the technique of the operation had not reached such stage of perfection for this particular condition as exists at the present day.

With a better knowledge of the lymphatic supply and the introduction of large crushing clamps (Payr), and the electric cautery for the control of hemorrhage and the destruction of the cancer cells, we are able now to remove the pyloric end of the stomach and make a direct anastomosis along the line of the incision in the stomach to the jejunum, thus avoiding the extra amount of time consumed in closing the stomach, and later doing a gastroenterostomy, combining in one operation a double procedure. Anything which will lessen the time and the danger and give better and more secure results in technique is always welcome and is a great step in advance.

The next most frequent type of cancer of the digestive tract is that of the large bowel, which is quite commonly affected, and carcinoma of the colon is found particularly in the cecum, ascending colon, sigmoid and rectum. It is indeed fortunate that cancer of the large bowel may remain for a long time a local one, as the lymphatics are few compared to other organs of the abdomen.

The results of extirpation of the cecum and ascending colon for cancer have been especially good. The tendency of late in cancer of the sigmoid is to do the two-stage operation of Mikulicz, as it is undoubtedly the safest procedure. First a colostomy is done and later a radical resection, when the patient has improved and is in better condition.

In cancers of the rectum a permanent colostomy with total extirpation of the rectum undoubtedly gives the highest percentage of cures.

C. H. Mayo has recently said: "Cancers of the rectum in which not more than eight inches of bowel must be removed, the distal section being not nearer than 2 1-2 inches from the anal sphincter, are usually best removed through the Kraske sacral incision, with resection of the coccyx and part of the lower sacrum."

The treatment which seems to promise the most in the future for cancers of the rectum situated low down, is the new Percy cautery method, which has attracted so much attention in the treatment of cancers of the uterus. This method has now been tried upon rectal cancers and indications are that equally as good if not better results, will be obtained than the radical operation with the knife. It cer-

tainly is easier of performance and should have a very low mortality.

The method would also reach out beyond the involved gut into the surrounding tissues which have become involved in the cancer. The basic principle of the Percy method is to use just enough heat to destroy the embryonic cancer cells, but not to affect the healthy tissue.

JNO. R. WATHEN.

THE CANCER PROBLEM.

Preventive medicine is the medicine of to-day. It accomplishes its work by educating not only the general body of the profession, along certain lines that have been worked out by a few earnest and capable men and women, but by educating the public at large.

The public has a need for, and a right to that knowledge that enables them to prevent and control disease.

Such education is easy when both the cause and course of the disease is known.

In the study of the cancer problem we are as far from a known cause to-day as we were a century ago. We have, however, been able to determine certain conditions, which either control, or at least modify the course cancers run. Also to classify such conditions as favor in their wake the rapid and uncontrollable division of cells known as cancerous growth.

Only a few years ago when Dr. Stewart McGuire made the alarming statement that in his judgment there were more cases of cancer in the State of Virginia than there was of tuberculosis, everyone thought that he had very materially exaggerated the true condition of affairs. To-day most surgeons are willing to accept this statement, if not entirely so, practically at face value. Modern methods of diagnosis, together with a better knowledge of living pathology recognized at the operating table proves the fact that cancer is very prevalent, and at least apparently on the increase. It is recognized as the common enemy of all mankind effecting both rich and poor alike.

When we stop to consider that in the United States alone more than 75,000 people die annually from cancer, that more than twice as many more are afflicted as die, and under present methods of treatment more than 90 per cent. of cases prove fatal, we certainly should give the subject our best and most serious thoughts.

One person in every eleven dies of this practically incurable malady. One woman in every seven or thirty-five must die from cancer. The loss in finance to the nation is nearly \$200,000,000 annually. This of course does not include the loss in homes of fathers and mothers, a loss that is inestimable.

Since we are unable to state the cause we

must be content to lay increased stress on the history of these cases and thereby hope to lower the death rate by having patients come for relief for those precancerous conditions. Women must be made to understand that of the cases of cancer of the breast coming under observation more than 90 per cent have borne children. So also those women who have become mothers and suffered cervical lacerations are the ones to furnish the greatest number of cancers of the womb, especially when the laceration is in conjunction with long standing metritis.

What should they be taught? First that they should inspect their own breasts for lumps, and if any are found to consult a physician at once. They must understand that every lump in the breast is a cancer unless proven otherwise. That delay courts disaster.

They must understand that long standing fissures of the nipple, inflammations involving the areola, chronic irritations kept up by the corset, and suppurative mastitis tend to favor the cancerous formation.

In other words to quote from Bainbridge: "It may be stated in general terms that for purposes of prophylaxis, so far as cancer is concerned, no matter what the nature of the irritant, when its effects are sufficiently marked to become a menace the cause of irritant should be removed, whether it be a chemical irritant associated with occupation, an actinic irritation arising from X-ray or other burns, mechanical irritation from the friction of wearing apparel or bacterial as giving rise to certain local predisposing lesions."

All growths of malignant character must pass through three stages, first, the time during which the presence of the growth does not attract the attention of the host. Second, the time consumed by the patient in waiting before seeking medical advice. Third, the time consumed by the physician in making diagnosis.

No one can shorten the first stage, but the second and third can be shortened by the education of the laity and the operative surgeon.

The surgeon's ability to diagnosis at sight depends on his ability as a student and his training as an apprentice.

As an argument to the laity as to what can be hoped for by their education, no more striking example should be looked for than cancer of the breast.

The woman who has an immediate operation for a lump in the breast has 85 per cent. chances for a cure with a possible 100 per cent. After a few months when a diagnosis is easy her best chances are only 64 per cent, while in the most malignant only 33 per cent. The danger is really greater than this for in a small per cent. the growth becomes so diffuse that nothing can be offered.

Since the cause is unknown our only hope in the management of cancer lies in an early diagnosis and a merciless attack while the pathology is yet localized. With this where it is possible the patient should have the benefit of such agents as electricity in its various forms.

A. D. WILMOTH.

MALIGNANT GROWTHS.

Malignant growths are very infrequent in childhood. There are, however, certain cases which occur that are congenital, or at any rate in early life. The kidney is more frequently involved than any other portion of the body. These masses are often recognized very early in the life of the child. The tumor is usually classified as a sarcoma of the kidney, though the growth is never of a very well defined and characteristic pathology. There are usually several different varieties of pathological changes found in the same mass. They are thought to be and probably often are congenital, though they are not usually recognized until after eighteen months of age and even then the attention of the physician is aroused only in the way of routine examination of the abdomen, and then the mass will be felt. Ordinarily they are not very painful at first and many times not at all. Hemorrhages from the kidney and blood in the urine are described by many observers, but have not been noticed in the somewhat limited experience of my own. If the mass can be definitely delimited to the kidney, an early operation is not only justifiable but may be of great value. The essayist had the opportunity of seeing Dr. Robert Abbe operate on a case in New York twenty-three years ago, which is reported in Kerley's Text Book as being still alive. Surgical interference may therefore secure a complete relief to the cancerous process.

Unfortunately, however, the malignant process often involves other adjacent structures. Hypernephromata, which attain a size that invades the whole upper abdomen are less frequent than the kidney involvement pure and simple, but they offer a less favorable prognosis because they cannot so well be removed. Involvement of the retro peritoneal glands has also been encountered and would, of course, give an absolutely grave prognosis. The other types of cancerous involvement in childhood are so rare as to be surgical curiosities and are not of sufficient interest to require any further elucidation.

PHILIP F. BARBOUR.

THE PROPHYLAXIS OF CANCER.

Unfortunately medical science has so far been unable to discover the cause of cancer. We have not in this disease, as we have in many of the infectious diseases, accurate knowledge of the causative agent, especially its life history and mode of transmission.

There is no doubt if a similar cause of cancer exists its characteristic and mode of transmission are ever discovered we will be able to add it to the list of preventable diseases.

However we are not without valuable knowledge of cancer, knowledge which forms a foundation for successful preventive measures. We know that cancer is found largely in people who have reached or passed middle life. This is probably due to the fact that with advancing age the resistance of the body to the invasion of malignant epithelial cells is diminished. We also know that chronic irritation whether due to inflammation, foreign bodies or benign tumors, is a frequent factor in the causation of cancer. In the digestive tract we have cancer of the mouth due to irritation of the pipe stem and also the frequency of carcinoma of the mouth of natives of India who have the habit of chewing the betel-nut mixed with lime. Cancer of the stomach is unquestionably due in many instances to the irritation of chronic gastric ulcers. Cancer of the appendix often starts as the result of a chronic obliterating appendicitis. Cancer of the gall ducts or gall bladder is almost always secondary to the chronic irritation of gall stones.

In the genito urinary system we find cancer of the breasts following the irritation of benign tumors. Cancer of the cervix uteri is very prone to follow the irritation of old unhealed lacerations. Cancer of the bladder is often engrafted upon a benign papilloma.

Two very interesting examples of the production of cancer by long continued irritation are furnished by skin cancers in chimney sweeps and cancer of the skin of the abdomen in the inhabitants of Kashmir who, for warmth, wear, under the clothing, a basket containing burning charecoal.

From this partial enumeration of the predisposing local causes of cancer the prophylactic measures necessary to be carried out are self evident.

If we could stop pipe smoking and chewing of betelnut many oral cancers would be prevented. The excision as far as possible, of all chronic gastric ulcers, the removal of all gall stones and chronically inflamed appendices would reduce greatly the number of gastric and intestinal carcinomata. Proper surgical treatment of unhealed lacerations of the cervix uteri, of benign papillomata of the bladder and benign tumors of the breast will

materially reduce the number of cancers of the genito-urinary system. Finally all warts, moles and other tumors of the skin should be thoroughly excised, especially in persons who have reached middle age.

F. H. MONTGOMERY.

THE GENERAL PRACTITIONER AND THE CANCER PROBLEM.

Many aspects of the cancer question are open to discussion. Etiology is disputed and treatment is the subject of debate. In the practical application of present day knowledge to the prevention and cure of cancer two facts stand out beyond dispute in their clearness; that the general practitioner has first chance at ninety per cent of all cases, and that prolonged irritation is in some way a causative factor.

The family doctor is first to see the lacerated and irritated cervix, the cracked nipple and contused breast, the gastric hyperacidity and ulcer, the irritated lip, cheek or tongue from the jagged tooth or the short, hot pipe stem, the vexed and vexing wart, the redundant or non-retractable prepuce, the cholecystitis with or without gall stones. It is his duty to observe these things in his patients and to explain the danger and urge correction.

A cervical laceration that is not irritated, eroded, discharging or tender does not call for repair during the child bearing period, perhaps never. But if it is the seat of trouble it is certainly a source of danger.

Gastric hyperacidity should not be allowed to go on to ulcer and cancer. Hyperacidity and even ulcer of short duration may properly be treated by diet, alkalies, bismuth and drainage by mild purgation or lavage. Any case that does not yield readily to this treatment is probably a dangerous chronic ulcer or already malignant. Therefore, unyielding cases and all cases of very long standing should be subjected to exploratory incision and surgical correction if available. The treatment of cancer is surgical, not medical. Let us be honest and unselfish enough to admit that the same is true of chronic irritation even before it becomes malignant. Let us, as general practitioners make early recognition of chronic irritation and acknowledge the futility of waiting to see whether malignancy will supervene. If we will observe our patients carefully, warn them forcibly, and step aside at the proper time, leaving the case to the surgeon, the cancer evil will be much lessened even with present day knowledge.

W. W. ANDERSON.

THE PALLIATIVE TREATMENT OF INOPERABLE CARCINOMA OF THE RECTUM.

In the space allotted it is impossible to discuss more than one phase of the subject of cancer. The writer will therefore limit himself to a consideration of the palliative treatment of inoperable carcinoma of the rectum; placing upon the term "inoperable" the usual construction, viz., impossibility of complete and absolute removal of entire malignancy.

Now, as never before, the thinking members of the medical profession are beginning to realize the magnitude of the Cancer Problem, and appropriate measures are being worked out not only for the prevention of this dread disease but also for the amelioration of the suffering of those unfortunates who, because of the almost invariable insidiousness of the malady, have already passed the period when radical relief may be given them.

All possible encouragement is due the work now so widely attempted having as its object the correct education of the public in regard to cancer.

Ten years ago Tuttle called attention to the alarming increase in the prevalence of this disease all over the world. The rate of increase then noted has been surpassed in more recent years. Twenty years ago Williams (Liverpool *Chirurgical Journal*, 1895) showed that cancer had increased in England and Wales from 1 in 5,646 in population in 1840 to 1 in 403 in 1894. The relative number of deaths from cancer as compared with those from all other causes in 1840 was 1 to 129, fifty years later it had increased to 1 in 23. In the City of New York the death-rate from cancer in 1890 was 1 to 1679 in population; ten years later it had increased to 1 in 1394.

Recent statistics are no more encouraging, although the point is frequently raised that this alarming increase in the number of cases may be more apparent than real because of the probability that a few decades ago, before modern instruments and methods of diagnosis had come into use, many cases of cancer may have gone unrecognized. Be that as it may the indisputable fact remains that cancer is, at present, alarmingly prevalent, and that in the vast majority of instances the sufferer waits too long before making his trouble known and seeking aid therefor.

By combining and averaging the statistical figures of a number of observers it seems clearly established that between five and six per cent. of all cancers occur in the rectum, and that fully eighty per cent. of those occurring in the intestinal tract are located in the sigmoid flexure or distal thereto.

Since there is in the majority, if not all, of

the cases of cancer the so-called pre-cancerous lesion no argument is needed to make plain the importance of timely attention to whatever source of frequently repeated or prolonged irritation there may exist, be it proctitis, suppurative processes, pruritus or ulcerated piles. These and other simple ailments, easily relieved if proper medical or surgical treatment be employed at the proper time, may, through malignant transformation, if neglected, result disastrously.

When the neoplasm already definitely exists the question of its removal or palliative treatment is not always easy to decide. Broadly speaking it may be stated that when the growth is found to be, or after careful examination is believed to be, a purely local affection, immediate, but radical, excision should be done. If on the other hand, as is so frequently the case, the growth is found to be no longer a local lesion but that it has extended into contiguous structures, involving other pelvic organs, surrounding or even distant lymphatics, then obviously extirpation can do no good. If, because of the extent of the involvement, the condition of the patient as regards lack of strength due to digestive or other disturbances, his apparent lack of ability to resist infection, etc., it seems impossible to do a complete operation, that is the removal of the entire growth with a safe margin of contiguous tissue, together with all infected glands no matter how remote, no operation for the removal of the tumor should be attempted. Partial removal of a carcinoma not only does no good but certainly does positive harm to the patient.

Under such conditions, then, whatever measures offer relief from the extreme pain attending rectal cancer, especially in its later stages, and conduce to the prolongation of life, merit attention. Chief among these, aside from the ordinary simple principles of diet, the use of antiseptic and astringent irrigations, etc., and the proper use of opium, there stands out prominently the operation of colostomy.

The writer is not aware of the attitude of the profession in regard to colostomy—many holding that it is never justifiable. A little investigation however, promptly brings out the fact that this view is based entirely—and as has been many times demonstrated, erroneously—on the assumption that a colostomy is little more than a fecal fistula, offering practically no control of bowel contents. It is admitted that the procedure as formerly executed was unsatisfactory to both surgeon and patient, as it merely consisted for the most part of making an opening into the intestine which permitted the discharge of feces, flatus, etc., at all times.

Since an opening above the neoplasm is im-

perative in most advanced cases of rectal cancer, a colostomy which will afford the patient at least partial control of the intestinal contents is an important desideratum. The methods of procedure hitherto employed being unsatisfactory, the writer devised what has been called a "controllable valvular colostomy," which he has repeatedly practiced during the last few years in the palliative treatment of inoperable rectal carcinoma. The procedure is executed in the following manner:

The site of the colostomy is determined by the location and extent of the neoplasm, and should naturally be well above the uppermost limits thereof. The abdominal wall and peritoneum having been incised, the colon is brought into the wound and examined. The portion in which the artificial anus is to be located having been decided upon a heavy cat-gut or kangaroo tendon ligature is placed around it at a point which, when the operation has been completed, will be immediately within and in contact with the abdominal wall. While this loop of intestine is still outside the abdominal cavity, the ligature having been drawn sufficiently tight so that the lumen of the bowel if opened at that point would barely admit the index finger, is secured upon either side of the ligature and brought together by a series of Lembert sutures completely encircling its circumference, thus producing an infolding of the intestinal wall. This is followed by a second row of Lembert sutures covering the first which produces additional infolding of the intestinal wall, and results in an aggregation of the circular and longitudinal muscular fibres and brings the intestine together for a length of five or six inches. This aggregation of circular and longitudinal muscular fibres conduces to the formation of an "artificial sphincter muscle." This portion of the intestine is then replaced within the cavity and the part that passes through the incision in the abdominal wall is carefully sutured to its sides in such a way that the newly-formed artificial sphincter will be just beneath and attached to the abdominal wall. A glass rod, such as is commonly utilized in other forms of colostomy, is then placed under the intestinal loop remaining outside to support it while healing is taking place, and a sustaining suture of silkworm gut is inserted at either angle of the external incision extending entirely through the abdominal wall, thus providing an adequate anchor for the intestinal loop.

The protruding portion of intestine is not incised at once unless the need of immediate opening be imperative. The protruding portion of intestine is then anointed with sterile vaseline, the dressing applied, and the patient returned to bed. In forty-eight hours, if there be no especial need for earlier atten-

tion, an incision is made in the form of a "T" at the most prominent portion of the protruding intestinal loop. A transverse incision is first made extending through about two-thirds of the exposed surface leading toward the proposed artificial anus, then a longitudinal incision sufficiently long to establish a free opening. This procedure is accomplished without the use of an anesthetic, the patient suffering practically no discomfort. By the insertion of a finger it will now be easily demonstrated that the artificial sphincter muscle causes complete closure of the intestine, yet possesses sufficient elasticity to permit the passage of feces. A purgative may then be administered to induce thorough cleansing of the intestinal tract, after which daily evacuations will occur normally or may be secured by either laxatives or enemata. In the majority of instances the patient will thereafter have complete control over the intestinal contents, and in all cases there will result a fair degree of control.

The advantages of this method of treatment should be obvious: In addition to saving the patient the straining and pain incident to the passage of feces, which would otherwise necessarily have to be forced through the cancerous stricture, it affords an outlet from a healthy portion of the intestine, thus making possible regulation of the fecal evacuations; it also renders much less likely the occurrence of hemorrhage from the neoplasm due to pressure and friction, and likewise obviates the more or less constant desire of the patient to defecate.

The adoption of this method of palliative treatment in inoperable rectal carcinomata will almost certainly lengthen the lives of these poor sufferers from one to three years beyond what could otherwise be possible, and will make existence during this period comparatively comfortable. The rectum should be frequently irrigated from above, the fluid passing over the neoplasm to be finally discharged via the anus. The neoplasm may be thus kept clean and also medicated as may seem advisable or necessary. It is oftentimes possible to soothe the irritated or ulcerated cancerous rectum by the introduction of olive oil from above, allowing it to pass slowly downward through the strictured zone.

BERNARD ASMAN.

J. H. Outland, Kansas City, Mo., (Journal A. M. A., March 27, 1915), publishes the details of a technic he has used in eighty-four cases of vaginal hysterectomy, with one death. It is admittedly largely a modification of other methods, but he feels that he has utilized their good points and produced a simplified and advantageous method.

SOME FACTS THE PROFESSION AND PUBLIC SHOULD KNOW CONCERNING CANCER.*

The registered areas of the United States for 1914 show that cancer claimed 100,000 victims and this area only included about 75 per cent. of the population. This fact in connection with the known fact that undoubtedly a large number of deaths occur annually from cancer, that are incorrectly diagnosed, will place the mortality from this dread disease at a conservative estimate, well towards the one hundred and fifty thousand mark.

In adults beyond the prime of life, cancer is one of the most frequent causes of death given in the vital statistics, and now that we have better learned to handle tuberculosis, cancer is rapidly reaching the head of the list in mortality statistics.

Those who are best qualified to judge, are of the opinion that if the public can be properly educated in regard to cancer, the annual mortality could be reduced at least one half. No one conversant with the subject to date will deny that we have sufficient information about which there is no disagreement which can be given to the public, and that this information will bring thousands of cases to earlier treatment, thereby greatly increasing the probability of cure. At the same time authoritative information can be given to the rank and file of the medical profession, through the Medical Journals, thereby enabling them in their role of family physician to give needful advice timely.

The evidence now to hand is, that the percentage of cures in cancer can be increased. We recall the fact that the time is not so far past when we were taught by the ablest teachers, that all cases of cancer were hopeless. The object of the present propaganda is to combat this feeling of pessimism, still all too prevalent among the laity; and unfortunately too large a proportion of the profession are imbued with a feeling of skepticism regarding its curability, and question the correctness of the diagnosis in cases that survive the five and ten year period.

In the control of cancer, we have to combat this skepticism, both in the profession and among the people. We possess the proof that cancer can be cured, taken in due time, and we must present our proof in such a convincing way that it will be believed. The most urgent need in the control of cancer is as stated above, in arousing the people to the necessity of seeking competent advice earlier and training the profession to the fact that the number of cures can be greatly increased by earlier intervention and better surgery.

The percentage of cures in fully developed cancer is relatively small. By fully developed

cases, I mean those in which there can be no question from the clinical signs alone of its malignancy. Where we do not need to study the gross or microscopical appearance of the cut tumor, the clinical picture of retracted and adherent skin, enlarged glands, cachexia and other unmistakable evidence, alas! makes the diagnosis only too easy.

This condition is what we term clinically malignant in contra-distinction to pathologically malignant, meaning by this latter term, a condition of malignancy that has not sufficiently advanced to enable us to make the diagnosis without the aid of the pathologist. When cancer is clinically malignant, the probability of cure is much smaller than when it is only histologically malignant, or in other words a case that falls into the hands of a competent surgeon before it reaches the stage where it can be diagnosed from the clinical signs alone has 80 per cent. chances for complete recovery as against 25 per cent. in the latter. The old method of waiting for the signs of malignancy simply means a vast decrease in chances of cure. The evidence now to hand is convincing that when the disease is treated before it becomes clinically malignant, the number of cures can be greatly increased.

In all parts of the body where we meet cancer, we also encounter lesions which histologically are not cancer, as for instance hairy and pigmented moles, warts, and other skin blemishes, and while histologically not cancer, experience and observation teaches us that a fair proportion of them ultimately become so. Anyone skeptical of this statement need only to question his patient carefully and he will be surprised at the frequency in the history of some skin defect previous to the developments of the malignant condition.

While we have no statistics to prove that the routine practice of advising the removal of all these so-called pre-cancerous lesions will lessen the deaths from cancer. Experience and observation points to the early acceptance of these statements as truths, and when that time arrives, no one need fear external cancer if he is educated to look upon these pre-cancerous lesions as the possible earlier stage of the more formidable lesion, and at once seek competent advice. Fewer operations will be performed for the clinically malignant type with its small percentage of cures, and fewer cases of the inoperable type will be seen.

It has been found very difficult to educate not only the people, but the rank and file of the profession as to the potential dangers of a lump in the breast, small defects of the skin, and mucous membrane, and irregular bleeding from the uterus, notwithstanding these evidences or danger signals, usually

visible, and always palpable. One has only to visit any large surgical clinic to find that these evidences are only too often disregarded until too late.

The clinical symptoms of the external type of cancer are usually so distinct, and the diagnosis so readily made, that it should not be difficult to educate the public to seek early and competent advice, but even with this type our educational efforts have been far from satisfactory. When we turn to the other type, the internal cancer of stomach, gall bladder, pancreas, colon, etc., the picture is a dark one indeed, and the educational problem a far more difficult one. The beginning, so slow and insidious, and the symptoms so closely allied to the minor gastro-intestinal disorders to which we are all heir; and so often, the symptoms not sufficiently distressing to cause the victim to seek advice, and if he should, the positive signs so few and elusive, that even a capable internist, can, in the majority of cases, only suspect but not diagnose, and has to fall back on the unsatisfactory advice to the patient, of having an exploratory laparotomy. Therefore, the inoperable groups of internal cancer will remain large until we either vastly improve our diagnostic acumen or educate ourselves and patients to understand, that in suspected cases an exploratory laparotomy is attended with far less danger than overlooking cancer in the operable stage, where it could be thoroughly removed at that time with every prospect of permanent cure.

In conclusion, I feel that evidence we now have to hand warrants these deductions: The control of cancer is a matter of education and the chief object of the present cancer propaganda is to hasten on this education that the percentage of cures may be increased. The number of cases of cancer are rapidly increasing and soon will rival tuberculosis as a cause of death. The resources at our command in controlling this dread disease have not kept pace with developments along other lines and what little progress has been made by the scientists in this field has not, through lack of proper educational facilities been impressed upon the rank and file of the profession, to say nothing of the public at large.

The public, and the profession as well, need to be taught that the number of cures can be greatly increased by earlier intervention and better surgery. All cancers are local in the beginning. All cancers are histologically malignant, before becoming so clinically, and there is a great difference in the prognosis between the two types, the percentage of cures being much greater in the former. In other words, if they wait until a very cursory examination will enable one with but little experience to make the diagnosis, then it is what is

known as clinically malignant, and chances for cure far less than in earlier stage.

Last but not most important is to teach both public and profession that the greater hope for the eradication of cancer rests on the recognition and care of the pre-cancerous lesion whatever or wherever it may be.

ROBT. L. BONE.

SUPERFICIAL EPITHELIOMA

Since we are more interested in the treatment of disease whereby the patient is mostly benefited, my remarks upon superficial epithelioma will lead to the treatment for the following reasons:

First: In the majority of instances epitheliomata upon the surface is rarely mistaken for any other condition. Second, should there be any doubt as to an accurate diagnosis it is a very simple matter to remove a small section of the tumor and submit it to a pathologist for a laboratory diagnosis.

Do no cutting for diagnosis until other methods have failed as by cutting into a tumor may act as a stimulant to more rapid growth, dissemination of carcinomatous cells to adjacent tissue and into the lymphatic system causing metastasis.

For the purpose of study, skin cancers or epitheliomas have been divided into many classes or degrees.

In a clinical way the best division is seemingly into two forms, i.e., the first being of a very superficial nature that tends more towards superficial spreading, does not involve the underlying surfaces and the skin is not adherent to deeper tissues. This form is seen quite often around the angles of the orbit possibly the more frequent location being the inner angle. These are very chronic in nature, of slow growth, after being present several years the tumor having attained only a small size without glandular involvement and may be cured by X-ray, excision or caustics.

The second type is symptomatically an entirely different disease. Usually a few months after first noticed it involves the adjacent lymphatics, is a destroyer of life and is rarely cured by X-ray, excision or caustics, although in the majority of cases improvement is noted or the growth is held in check so long as treatment is persistent. This is the intractable form quite often occurring upon the lip and is microscopically the same as the less malignant. It is very rapid in growth, showing early lymphatic involvement with or without operative interference.

In the true skin-cancers (the first type) X-ray therapy is almost sure of success, the

cosmetic effect being better than from any other method of treatment.

For practical purposes the divisions of malignant lesions may be easily placed into three groups, i.e., those in the first, second or third degree of malignancy.

(1). The first degree or incipient surface cancers can be cured by physical methods, if deep by the same methods and surgery.

(2). The second degree of malignancy may be cured, and are usually benefited by either surgery or irradiation vigorously. Many inoperable cases under massive X-ray therapy may become operable, a permanent cure resulting by removal and post operative radiotherapy. In this way the lymph-channels are sclerosed, being virtually closed off and a much safer procedure than surgery primarily. In surgery all the immediate lymph channels near the tumor are opened giving an opportunity for transplantation to occur in some other structures.

(3). The third degree of malignancy includes the superficial and deep inoperable growths which cannot be cured under any treatment, are very undesirable subjects as the prognosis can only be 100 per cent bad. Many of these cases are made more comfortable by treatment, all show improvement and later respond to no treatment.

What we believe to be the better points in technic of many of the early operators is at present being combined and in the hands of efficient, conscientious, tireless workers better results are being obtained throughout the country.

It is not my purpose to decry surgery in the least, but to present to you the best methods at present in vogue, by the most experienced workers in the larger clinics.

In the second and third degrees of malignancy, numerous symptomatic cures are being reported where all visible and palpable malignant disease is first removed by electrothermic coagulation by the d'Arsonval current, followed, or sometimes preceded by massive doses of X-ray, by the cross-fire method in order to get rays from as many fields of entrance as is possible.

By massive dosage we mean as much as the skin will permit, without presenting an X-ray burn, an X-ray dermatitis being permissible to get the desired results. Very few patients object to a bronzing of the skin not more marked than a sunburn in order to secure a permanent benefit, when suffering from a malignancy. By the cross-fire method the tumor is attacked from as many skin surfaces as possibly the remaining surfaces being protected by sheets of lead. In this way the central portion of the tumor receives as many times the skin area as there are different fields of entrance.

In lesions treated by electro-thermic coagulation and massive irradiation a great deal of sloughing is expected for several days following their removal. Local or general anesthesia is required according to the location, extent of involvement and the temperament of the patient to be treated.

All palpable and visible malignant diseases must be destroyed, if possible, to prevent a recurrence, in and near the margins of removal unless it is possible to prevent this recurrent tendency by heavy Roentgen therapy.

The electrode under this technic sears or closes the vessels and lymph-spaces. Where a knife or cutting instrument is used directly the opposite is true, the vessels and lymph-space being opened up giving a good opportunity for marginal and metastatic recurrences to present themselves in a short time.

CONCLUSIONS.

1. Early recognized surface cancers can be cured, (a) by physical methods if superficial; (b) by physical methods and surgery if deep.

2. Advanced cancer can not be cured by present methods.

3. No new factor is responsible for recent successes but a careful employment of the most efficient technic, with an early diagnosis and prompt treatment.

4. Electrothermic coagulation is bloodless, completely seals the operative area and is less likely to be followed by metastasis in other organs.

5. Deep Roentgen therapy must follow destruction by electrothermic coagulation.

6. Too short a time has elapsed to give any definite prognosis to the ultimate cure of many of the many symptomatic cures.

D. Y. KEITH.

Reversal of the Circulation.—J. S. Horsley, Richmond, Va., and R. H. Whitehead, University Va., (Journal A. M. A., March 13, 1915), have experimented on dogs with the operation for reversing the circulation in the lower extremity—that is, attaching the cardiac end of the artery to the distal end of the vein, and the distal end of the artery to the cardiac end of the vein, which had been reported as possible in dogs by Carrel and Guthrie, but which had been considered as of little actual value by Halstead and Vaughan. They had not themselves been convinced of its therapeutic value or its justifiability, since in order to prove that it is such by giving more nutrition it must be established that the arterial blood in the reversed vein reaches the ultimate capillaries of the foot. In case it does, how is the arterial blood returned to the heart? They conclude that the operation has no legitimate place in clinical surgery except possibly in Raynaud's disease.

THE PRESENT STATUS OF THE CANCER PROBLEM; HAVE WE THE HOPE OF A CURE?

Have you ever asked yourself, possessing the full knowledge of medical lore that you do, what way you prefer to die? Have you ever in philosophical vein reflected upon what death would possess the least terror, the least suffering, the most complete euthanasia and tried to balance upon the scales of medical knowledge, which particular blade to the scythe of Father Time you would prefer to mow you down, as the last grain of sand fell through the hour glass of Time? Perhaps not. But certainly from time to time as your experience has ripened, the prayer has been spoken audibly or inaudibly, "From a Cancer Death, Good Lord Deliver Me." Have you not dreaded the ordeal that as physician, more in the sense of Christ than medical, you were compelled by duty and that heroic purpose of medicine to watch and wait by the cancer bedside, through travail and suffering, through agony and torture, until tired Nature, as God's Command, gave way to the inevitable, to that peace at last, that "passeth all understanding?" Have you felt the slightest regret when this took place? I cannot feel that the true physician would ever deny his patient the privilege of an early demise. We may rail and condemn the use of morphine, and improperly used, this is right to do, but when face to face with that terrible Demon, who, burying his talons in the soft, tender flesh of his victim, slowly tears and tortures; then, if in your nature, kindness and sympathy prevail, on bended knee, you thank the day that gave you opium and its derivatives. *Te deum Laudamus.*

But this care and suffering for humanity's sake, in the line of your professional duty, is as nothing, when the grim hand and terrible talon is placed upon you or those who are near and dear to you. To wake to the terrible consequences, no matter which way you turn is something a tender soul can hardly endure. Operative work and 80 per cent. death by cancer on one side and certain, sure cancer death on the other. It is indeed the choice of the martyr. These are silent and noble heroes, who meet death in its most horrible form, not in the full possession of health, in the gallant charge with life and drum playing, but after weeks and weeks of agony and patience. To them the World holds no brief, their greatest blessing lies in Death and to them, this cold kiss is as that of a loving bridegroom to his newly wedded bride. What refined terror, what mental agony frequently is found in people, who bring to your consulting room, the legend "cancer runs in my family." Does it? Whether it does or does not, does

not lessen the terror, does not keep us from shivering as did Kipling's little Junglemann, from fear, a primitive instinct we can never shake off. And these cases are as a rule found more among well to do, the so-called better classes, than those poverty-stricken, and it is in such people, with their fuller knowledge of cancer states that we find them living in a well founded dread of cancer, because it "runs in my family."

This has been the problem of the ages. It's very name, the word itself sounds sinister. Think of it. The world over, one woman in every seven and one man in every eleven has to die of cancer. Who is it to be? No one knows. A far more humane method would be to draw lots, and let the victim die peacefully under an anesthetic or some other form of euthanasia. But it is even worse than that; every year that you live increases your chances for malignancy. Terrible, is it not? Here, then is a spectre, grim and determined, that stalks and persistently dogs the tracks of those who have passed the meridian or middle period of life. By care and the observing of hygienic laws, you can escape tuberculosis, typhoid, typhus, plague, yellow fever and a host of diseases; by care you can avoid and if attacked, have a reasonable chance for recovery. But not so with cancer. *At every age*, increasing with each year, becoming a greater and greater menace day by day, year by year, decade by decade, the nearer you approach the sere and yellow period of life. And you can do nothing to prevent it. It is not due to dirt; it is not contagious and infectious in the ordinary sense of the word. No particular diet, habit or hygiene provokes it; it comes with prosperity, hygienic surroundings, good food and nutrition, more often than in dirt and poverty. It is a disease of the upper classes.

Here then, we have a disease, a growth, a tissue change that we know physically, that we name, classify and study; upon which we operate when we can, and when all is told, lose four out of every five of our cases in a manner simply too horrible to contemplate. With all our knowledge, with all the noble work surgery has done and the results accomplished, in its presence, we can feel a mystery and instinctively sense the sorrow and hopelessness of our cause. Summed up in six words, our ordinary surgical methods "gives the patient the best chance." That is mighty little for the undergoing of one of the longest, severest, most mutilating of operations and seemingly the greater the mutilation, the better chance. We give a part in the *hope* not *certainly*, of escaping a horrible death, and even then in the horrible gamble, the odds are against us. Will this terrible sphinx open her mouth, tell the secret of the ages and permit

the pigmy man a chance against the giant, David against Goliath? It would seem as though such was the case. To talk of a *cure* for cancer, to talk of specific medication for cancer, is to run the risk of being tabooed by your own profession. How queer. You would think that every medical man would at once kow-tow to the man who could even produce the slightest impression upon or stay the progress of cancer. Of course, we would expect as a *condition precedent* that the man so speaking, *really* had a right to speak upon the subject. Of course, where a group of men are well known; who are scientific; who are known to have worked for years along this line, speak in the cautious, careful tones of science, who demonstrate their work, in other words "make good," then we should and must give heed and faith especially "when my ears have heard and my eyes seen those things that constitute the faith in me." Such is a little group of men composed of Drs. Alex Horowitz, S. P. Beebe (of exophthalmic goitre fame), J. Wallace Beveridge, A. Judson Quimby, men holding high position and just fame in the medical world, who believe they have solved this riddle and who seem to be performing the hitherto impossible, the *apparent* relief and disappearance of the cancer growth.

This is not the result of chance, but of many years of constant, steady research by Horowitz, assisted by Beebe, Beveridge and their conferees. It is based on the following grounds tersely stated; cancer cells are protein compounds; that under certain conditions, the blood of a healthy person will digest cancer cells; that the power to digest cancer cells or prevent their formation, is due to certain properties of the blood and tissues; that the absence or immunity secured by their presence, is interfered with in order that cancer may develop. Based on the idea that the green pigment chlorophyll, was the synthetic agent in the upbuilding of plant life, this was extracted from *Cannabis Indica* (Hashish) chromophyll, an alkaloid not of the ordinary type, extracted from the nuclei of the pentaphyllii, bearing an intricate relation to the process of cell growth and division, was likewise used in combination with other biologic products. It is interesting to note here in passing that we know little of chlorophyll, save that it is closely associated with the conversion of inorganic into organic matter, and that chromophyll is closely associated with the generative activities of every cell of living matter. The final outcome and combination of these delicate substances is a transparent, greenish or greenish-brown fluid, possessing the power of autolysis, that is to say, the power of stimulating the cells of the host and weakening the cells of the growth until

they undergo dissolution or self digestion. It is administered hypodermically and if reports and demonstrations are to be accepted, the problem is much nearer of solution. Every medical well-wisher should say "God speed the day." Think of it. The word of eminent honest, scientists, backed by the actual clinical work, to the effect that *hopeless, inoperable* and *unquestioned* cancers have yielded to the remedy with results far beyond the dreams of belief, restoring men and women temporarily to the bosoms of their families, destroying the growths, giving hope for the future and adding to the sum total of human happiness. Think what it will mean to the three and a half million cancer sufferers. Not only will the ban of death be lifted, but suffering and terror will have fled. As to the permanency of the relief, no one can as yet say, but even if the treatment had to be repeated this would be a tremendous advance. We can only hope that this sand will pan out pure gold, and that the laurel wreath will crown their brows. Pans of praise; of thankfulness, should rise like incense and our hearts warm with the feeling that the Golden Gate of Hope has, at last, been opened.

Ora et labora.

CURRAN POPE.

A NEW SOCIETY OF ANESTHETISTS.

That anesthesia administration is at last coming into its own as a highly developed specialty—recognized, honored, and accorded the same dignity that the older specialists have long enjoyed, is obvious to any one who has kept in touch with the progress made in the past few years. To many who were present during the organization meeting of the Inter-State Association of Anesthetists in Cincinnati in May, the attendance, the enthusiasm, and principally the scope and quality of the scientific program, was a revelation. Essays—many illustrated by stereopticon, covering practically all that is recent in scientific anesthesia and analgesia; free discussions, and an interesting demonstration of intra-tracheal anesthesia; exhibiting a simplified portable apparatus; made up the two days' program. Social features were not over-looked, the members enjoying a dinner the evening of the first day, at which the permanent organization was effected, and after which the anesthetists were the guests of the Ohio State Medical Association, at a smoker. The ladies were charmingly taken care of by a committee headed by Dr. Nora Crotty of Cincinnati, and their diversions included a theatre party and an auto trip through the beauty spots of the city.

Following closely the organization of the American Association of Anesthetists,

and the establishment of the Anesthesia Supplement; a journal published quarterly within the covers of the *American Journal of Surgery*, but with its own distinct editorial staff, devoted exclusively to anesthesia and analgesia, and acting as official organ for the American Association of Anesthetists, the Scottish Society of Anesthetists, and other such bodies; those of us who have long worked for the better recognition of this specialty have reason to feel singularly gratified.

The Inter-State Association of Anesthetists was organized with the idea of bringing together those physicians and dentists in the Middle West who are actively engaged in this work, or sufficiently interested in it to become members of such an organization. Naturally composed principally of anesthetists, the membership is not limited. On the contrary it is the plan of the officers and Executive Committee to interest surgeons and others, that all aspects of anesthesia may be touched upon, and that a proper relation may be better established and maintained—good "team work"—between the operator and his anesthetist. "To advance the science and practice of anesthesia and analgesia and to conserve the interests of anesthetists." This, broadly, is the object of the organization.

The Association will meet annually, preferably in conjunction with the State Society of one of the States in this section. Its present officers are: W. Hamilton Long, Louisville, President; Isabelle Herb. Chicago, Vice President; F. Hoeffler McMechan, Cincinnati, Secretary and Treasurer.

W. HAMILTON LONG.

Standardizing Bacterins—A review of the principal methods used to standardize bacterins (bacterial vaccines) is given by C. P. Fitch, Ithaca, N. Y., (Journal A. M. A., March 13, 1915.) These include Wright's method, the nephelometer method first used by Mallory and Wright. All of these are described and their defects and advantages shown, and summed up as follows: "1. Some method employing the hemocytometer offers the most accurate technique for standardizing vaccines. 2. Comparisons of different counts made of the same suspension by Wright's method showed an average variation of 15 per cent. 3. Comparisons of different counts made of the same suspension by the 0.02 mm. hemocytometer showed an average variation of 5 per cent. 4. Comparisons of counts of the same suspension made by Wright method, Allen's modification, and the chamber method (0.02 mm.) showed that the former two gave a much less number of bacteria. 5. A less degree of uniformity of counts has been obtained with the 0.01 mm. chamber than with the 0.02 mm. 6. Callison's diluting fluid seems to be the best of any so far used

OFFICIAL ANNOUNCEMENTS

KENTUCKY STATE MEDICAL ASSOCIATION PRELIMINARY PROGRAM.

ANNUAL SESSION, LOUISVILLE, KENTUCKY,
SEPTEMBER 21, 22, 23, 1915.

1. Roentgen Ray in the Diagnosis of Bone Lesions.—Dr. J. B. Mason, London.
2. Focal Infections.—Dr. N. T. Yager, D. D. S.
3. Goitre.—Dr. J. R. Wathen, Louisville.
4. Rectal Essay.—Dr. G. S. Haynes, Louisville.
5. Pneumonia in Children.—Dr. Josephus Martin, Cynthiana.
6. Facts in Ophthalmology Essential to the General Practitioner.—Dr. T. W. Moore, Huntington, W. Va.
7. Life Insurance Paper.—Dr. Franklin C. Wells, New York City.
8. Intensive Treatment of Syphilis.—Dr. I. N. Bloom, Louisville.
9. Syphilis of the Heart.—Dr. J. R. Morrison, Louisville.
10. Chronic Prostatitis.—Dr. Herbert Bronner, Louisville.
11. Verumontanum (With Lantern Slides).—Dr. Geo. H. Day, Louisville.
12. Digitalis; Its Indication and Manner of Use.—Dr. W. W. Anderson, Newport.
13. Therapeutic Measures Other Than Drugs.—Dr. Curran Pope, Louisville.
14. Cardio-Vascular Disease.—Dr. W. F. Boggess, Louisville.
15. Heart Complications in Infectious Diseases.—Dr. A. L. Thompson, Madisonville.
16. Gastric and Duodenal Ulcer; Medical.—Dr. J. T. McClymonds, Lexington.
17. A Plea for the More Thorough Examination of Patients Presenting Symptoms of Tuberculosis.—Dr. O. O. Miller, Louisville.
18. Anaesthesia.—Dr. W. Hamilton Long, Louisville.
19. Common Sense in Dermatology.—Dr. M. L. Ravitch, Louisville.
20. The Harrison Law.—Dr. E. A. Stevens, Mayfield.
21. The Diseased Tonsils; What Shall We Do With Them.—Dr. Clyde E. Purcell, Paducah.
22. The Head Cold: Parts Involved, and Some of the Results.—Dr. C. A. Moss, Williamsburg.
23. Complications of Middle Ear Suppuration.—Dr. L. S. Givens, Cynthiana.
24. Difficult Presentations.—Dr. J. T. Reddick, Paducah.

- Practical Demonstration of the Above.—Dr. Edward Speidel, Louisville.
25. Endometritis of the Unmarried.—Dr. J. L. Phythian, Newport.
 26. The Uses and Abuses of Narcotics and Stimulants.—Dr. F. H. Clark, Lexington.
 27. Some Points in Diseases of Children.—Dr. E. B. McMorries, Clinton.
 28. Radicalism or Conservatism in Surgery.—Dr. David Barrow, Lexington.
 29. Gastric and Duodenal Ulcer.—Dr. Michael Casper, Louisville.
 30. Fractures, (Lantern Slides).—Dr. J. B. Murphy, Chicago.
 31. Surgery of the Infected Hand.—Dr. W. L. Gamhill, Jenkins.
 32. Lobar Pneumonia.—Dr. C. K. Brosheer, Middlesboro.
 33. Catarrhal Pneumonia.—Dr. J. L. Dismukes, Mayfield.
 34. Accessory Sinusitis.—Dr. J. T. Reynolds, Mt. Sterling.
 35. Medico-Legal Paper.—Honorable Fred Foreht, Louisville.
 36. (Subject to be announced).—Dr. C. L. Heath, Lindsay.
 37. (Subject to be announced).—Dr. B. E. Gianinni, Straight Creek.
 38. Rabies.—Dr. L. H. South, Bowling Green.

Pituitary Extract.—The results of a study of the treatment of hemorrhage in operations on the nose and throat by hypodermic injections of pituitary extract are reported by H. Kahn and L. E. Gordon, Chicago (Journal A. M. A., Jan. 23, 1915). They made a study of the blood-pressure before and after the administration of the drug in the hope of adding something to our knowledge on the blood-pressure in children and the effects of the drug. The coagulation time was also studied. All but three of the patients were children aged between 4 and 12 years and the dose was 12 minims hypodermically in children and 15 minims in adults, not less than fifteen minutes before and after the fifteen-minute interval and the same was the case with the blood-pressure. In the early cases the Brodie and Russell coagulometer was used and in the later ones the "drop on the slide" method. The authors' conclusions are given as follows: "1. The coagulation time of the blood is materially reduced by the hypodermic administration of pituitary extract. 2. The hemorrhage following nasal and throat operations is much reduced, especially operations on the turbinates. 3. The effect on the blood-pressure of children is variable, as follows: Systolic pressure was increased in 55.31 per cent. of the cases, reduced in 36 per cent. and unchanged in 8.5 per cent.

ORIGINAL ARTICLES

MALIGNANT GROWTHS OF THE PROSTATE.*

By CLAUDE G. HUFFMAN, Louisville

No organ nor tissue embraced within the human economy enjoys the distinction of being entirely exempt from the ravages of cancer; and why certain portions of the body are attacked with greater frequency than others, has never been definitely determined.

"Cancer has been a constant subject of study in all ages and in all nations, but the mystery of its origin has yet been unsolved, resistance to its progress has yet proved unsuccessful, and the symbolic crab continues to sink its claws slowly but relentlessly into the flesh of its victim. The disease, at first local, becomes regional and constitutional; recurring when removed, disseminating when left; undergoing degeneration, intractable ulceration, deep spreading excavation, and is usually followed by cachexia and death."

"It must be confessed that in spite of the time, brains, energy, and money, which have been expended during the past few years in the attempt to solve the problem of cancer in almost all parts of the civilized world, little or no apparent progress has been made."

Since the scope of this dissertation is limited to consideration of the prostate gland, it would be inappropriate to discuss the numerous so-called varieties of malignant growths, to review details concerning the multitudinous fanciful theories hitherto advanced in attempted explanation of the presumed etiological factors, to describe *in extenso* the intricate histo-pathological characteristics, or to elaborate the diversified symptomatology, there being abundant available authority to substantiate or discredit the most extravagant statements which one might desire to make concerning every phase of cancer regardless of the anatomical region attacked, and the prostate is no exception to the rule. However, certain brief histo-pathologic outlines may be permissible.

The normal acinus of the prostate is lined with a single or an imperfect double-layer of columnar epithelial cells. These are the differential or specific functional cells of the gland. In examination of pathologic specimens, these functional cells are seen frequently in a state of excessive proliferation, forming projections in and bridges across the acini. There is observed also partial or complete exfoliation of the same cells with the formation of cysts, which are empty or con-

tain accumulations of the cells in varying degrees of degeneration. Some fields are noted in which the acini present not only the proliferated functional cells, but also outside these and immediately adjoining the stroma, another row of cells, which are morphologically dissimilar to the inner row of differential cells. Other fields contain acini with functional cells present, exfoliated or absent, and the lumina partially or completely filled with the hyperplastic undifferentiated cells of the outer row. Still other fields are seen in which these hyperplastic cells of the outer row are both intra-acinic and extra-acinic, consequently presenting epithelial invasion of tissue,—the accepted picture of cancer. Furthermore, what is impressive, the three conditions just described have been observed together in the same microscopic field. (McGrath).

Some authors maintain that cancer does not begin in a hypertrophic portion of the gland, that its presence here is an invasion from a focus situated elsewhere in the organ, usually in the posterior lobe. Others state that cancer occurs as an almost imperceptible transition from a benign adenoma. Still others, disregarding as unessential the consideration whether the associated process be one of general hypertrophy, adenoma or other pathological condition, view, apart from its causation, the pathogenesis of prostatic cancer, likewise of cancer in general, as fundamentally a question of the histogenesis of epithelial cells. (McGrath).

Malignant growths involving the prostate may be either sarcomatous or carcinomatous, the latter being more frequently observed than the former. Experience demonstrates that neither can be considered as uncommon as hitherto believed. The prostatic tumor is usually primary, but may be secondary or metastatic. Inflammatory changes, prolonged congestion from any cause, and simple glandular hypertrophy, sometimes appear to favor malignant development. Prostatic invasion may also occur secondarily by extension from adjacent organs.

Prostatic sarcoma is most frequently encountered in individuals less than ten years of age, next in those more than fifty; instances have been recorded between ten and fifty, a few between thirty and fifty. Statistics show that about fifty per cent. develop before the age of ten; twenty-five per cent. between ten and thirty; five per cent. between thirty and fifty; twenty per cent. beyond fifty years. Metastasis is not uncommon, especially in small round-celled sarcoma. Carcinoma of the prostate, on the other hand, is pre-eminently a lesion of advanced life, few examples having been recorded in patients less than sixty years of age. Metastasis and extension to

*Let it be understood that where not otherwise specified, "malignant growth" as utilized in this paper, may be interpreted to signify any variety of cancerous tumor.

adjacent structures occur with greater frequency in carcinomata than in sarcomata.

Malignant tumors of the prostate may be either intra-capsular or extra-capsular, i. e., in the former the neoplasm is limited by the prostatic capsule, whereas from extension the latter may become diffused throughout the entire pelvic cavity. In intra-capsular neoplasms examination generally reveals the prostatic surface hard, smooth, irregular in contour, and one or more lobes or the entire gland may be implicated. The vesical trigone is usually elevated, and the urethral curve altered by the lobular deformity. In extra capsular growths the prostate in some instances retains its normal size and contour, in others pressure may cause reduction resembling atrophy. More frequently, however, considerable enlargement and deformity of the gland are noted, with extension of the neoplasm ramifications in various directions. In some instances the neoplasm attains the size of a lemon, in others from contiguity of structure the entire pelvic contents may become involved. It has been shown that more often than otherwise malignant growths begin in the posterior prostatic lobe.

The clinical picture presented is practically identical regardless of the variety of the neoplasm. In the majority of instances disturbances of micturition, due to pressure with consequent narrowing and tortuosity of the urethral lumen, are the clinical manifestations first noted. Considerable straining may be necessary to enable the patient to completely empty the bladder; the urinary stream becomes smaller, and the act more prolonged than in simple hypertrophy; dribbling of the urine generally supervenes within a short time; finally partial or complete retention ensues. Hematuria is inconstant and may therefore be misleading. As a rule hemorrhage occurs as a late manifestation, and generally indicates trigonal involvement. So-called "cancer cells," blood, prostatic and connective tissue cells, are usually demonstrable in the urine. Pain in the prostate radiating toward the lumbar region, simulating lumbago; pain in the legs, resembling sciatica; painful defecation and tenesmus, are common accompanying manifestations. A sanguinolent rectal discharge may be rarely observed.

While the foregoing clinical symptoms are recognized as important, the pertinent fact must not be permitted to pass unobserved that early differential diagnosis between a malignant growth and hypertrophied prostate may be practically impossible. In young subjects the symptoms may not be pronounced until the neoplasm attains considerable size, when dysuria and varying degrees of retention are likely to suddenly ensue. If a malignant growth be present, however, phys-

ical examination usually reveals more or less hypertrophy of the glandular structure. Rectal investigation discloses a hard, smooth, nodular tumor. Cystoscopy shows nodules about the vesical trigone and the internal meatus. Ulceration in these situations is indicative of carcinoma rather than sarcoma.

Like malignant neoplasms in other anatomical situations, the histo-pathological characteristics of prostatic growths are represented by abundant cellular proliferation, the character of the predominating cells depending upon the variety of the tumor. As already suggested carcinomata are most frequently encountered, next large and small round-celled and spindle-celled sarcomata, the lympho-, myxo-, and angio-sarcomata being less common.

According to Wolfe (as quoted by Guiteras) the course of malignant tumors of the prostate is exceedingly variable. For instance, in sarcoma the so-called latent stage may last for several years, and in very malignant cases the duration is from a few months to three years. "These growths (sarcomata) are probably developed from embryonic tissue remnants, rather than from the prostate gland itself. Some have been described as containing striped muscle fibres." (Guiteras).

The association of prostatic hypertrophy and malignant growths, of "malignant degeneration of an hypertrophied prostate," is not uncommon in their examination of one hundred prostates giving a picture of benign adenomatous hypertrophy. Albarran and Halle found typical epithelial proliferation, i. e., carcinomatous degeneration, in fourteen. Many other examples have been described where examination after removal revealed adenomatous prostatic hypertrophy with areas of distinct carcinomatous changes. Young noted malignancy in 28 per cent; Albarran 14 per cent; Walker 16.5 per cent; Wilson and McGrath 15.5 per cent; Freyer 13.4 per cent; Moullin 25 per cent; Binney believes malignancy supervenes in 15 to 20 per cent of all so-called hypertrophied prostates.

The treatment of malignant growths of the prostate constitutes one of the darkest chapters in surgery of the urogenital tract. Despite the tremendous advancing strides toward the acme of perfection in the surgical treatment of other lesions, the wisdom exhibited by the venerable Father of Medicine (Hippocrates) who wrote concerning the treatment of cancer twenty-four centuries ago, that "the deep-seated forms are best untreated, for if treated the patient soon dies, other wise he might live a long time," is emphasized by the disastrous failures which sometimes follow the application of modern accepted methods of procedure.

In malignant tumors involving the prostate, one should observe the surgical axiom applicable to cancer in other equally accessible anatomical regions, viz., that the possibility of successful surgical intervention must necessarily be predicated upon early recognition of the character and extent of the lesion, and the thoroughness with which its extirpation may be thus accomplished. As already intimated, however, the early diagnosis of prostatic malignant growths may be utterly impossible by any known method of investigation, and the clinical manifestations may not become pathognomonic until after the lesion has already progressed beyond the possibility of successful eradication by the application of surgical measures. When by metastasis or otherwise the cancerous process has extended to adjacent organs,—the seminal vesicles, the vesical trigone; the inguinal, iliac and retro-peritoneal glands; the pelvic cavity, the osseous structures, etc.—it would appear the height of absurdity to anticipate that either the patient will be materially benefitted, or that life will be markedly prolonged by the invocation of radical surgical treatment.

The evident impossibility of effecting enduring relief from surgical intervention in the later stages of prostatic cancer, and the frequently demonstrated tendency of simple hypertrophy to undergo malignant degeneration, emphasizes anew the imperative necessity of early prostatectomy as a prophylactic measure in the conservation of life. Based upon the statistics of Young concerning the frequency of malignant transition, which no one can well afford to ignore, it is clearly the duty of the surgeon to immediately enucleate the gland so soon as it begins to cause symptoms. The risk then is slight compared with the danger to life should malignancy supervene.

It has been amply demonstrated by experience that where malignancy has not extended beyond the prostatic capsule, whether it be primary or secondary to simple hypertrophy, the prognosis following prostatectomy is reasonably favorable, and in the hands of an expert surgeon the operative mortality should be practically nil. Motz and Majewsky have emphasized the dicta, however, that when the patient has violent neuralgic pains in the lumbar region, the ischio-crural region, and the perineum, the neoplasm has in all probability become inoperable.

According to most authors, a prostate attacked by a malignant growth prior to adenomatous enlargement, can rarely if ever be successfully enucleated, from the fact that when symptoms become manifest the disease has already extended beyond the capsule and invaded adjacent structures. However, where

a malignant tumor develops in a previously enlarged adenomatous prostate, which is still movable and the adjacent structures are uninvolved, i.e., the neoplasm being confined within the glandular capsule, the prostate may not only be successfully enucleated, but the operation may be undertaken with the reasonable expectation of an ultimate favorable outcome.

Freyer emphasizes the following pertinent facts: That it is impossible to enucleate suprapubically, or by any other method effectually remove, an advanced cancerous prostate; that treatment must be limited to amelioration, the catheter being employed so long as it can be introduced without difficulty or pain; that when its insertion is attended by pain, difficulty or bleeding, recourse must be had to suprapubic cystotomy with establishment of permanent drainage; that when pain is severe the free administration of opiates (particularly morphine hypodermatically) is imperatively demanded. He claims that radiotherapy is useless in the treatment of prostatic cancer. On the contrary, Pasteau and Degrais dismiss the surgical treatment with the statement that it is dangerous and the ultimate results purely problematical. They advise the intraprostatic application of radium, and are convinced the method has a definite field of usefulness; that even if it does not effect a complete cure, it alters the neoplasm to such an extent that prostatectomy may be subsequently undertaken with material reduction in the risk. They recommend that radium be introduced by means of a special coude catheter, in tubes containing two, four and five centigrammes; that determined entirely by the reaction the application should be made every three, four or six days, the duration being from two to four hours; that after five or six such applications, it is advisable to suspend treatment for three or four weeks before commencing a new series.

Inasmuch as benign hypertrophy is indistinguishable from a malignant growth in its early stages, other authors recommend that in every instance of acute or chronic urinary retention where catheterization is impossible, also in severe cystitis, and where for any reason renal function cannot be estimated, the treatment must be limited to drainage, reserving the question of prostatectomy for future consideration.

Where a malignant growth of the prostate has advanced to the inoperable stage when the patient is first observed, the treatment recommended as being most appropriate is as follows: In the absence of residual urine, administer urinary antiseptics with morphine to control pain when necessary; if there is residual urine, catheter life must be immediately instituted using a large-sized hard

catheter, supplemented by urinary antiseptics and morphine; if obstruction exists, or if catheter life is intolerable, establish permanent suprapubic drainage.

The prognosis as to longevity of the patient with a malignant tumor of the prostate must be expressed with extreme reservation. In one instance dissolution may occur promptly from systemic invasion by extension or metastasis; in another the patient may exist in comparative comfort for several years after establishment of suprapubic drainage. Examples have been recorded where marked improvement in physical condition was exhibited by the patient following suprapubic cystostomy, probably due to "relief of back pressure upon the kidneys," which constitutes an unanswerable argument in favor of early establishment of vesical drainage in the presence of an inoperable malignant tumor.

In conclusion, the writer wishes to express entire agreement with those who advocate and practice suprapubic prostatectomy, whether it be for simple hypertrophy or a malignant growth. In comparison with the perineal method of approach, the suprapubic operation seems to possess so many advantageous technical features that its universal adoption would appear the height of surgical wisdom where prostatectomy is indicated. It is tentatively admitted, however, that the perineal operation may occasionally be permissible, and that the combined method of approach may be demanded under certain limited circumstances.

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THE X-RAY AS A THERAPEUTIC AGENT.*

By J. J. RODMAN, Owensboro.

Twenty years ago Roentgen developed that all penetrating light-rays, the nature of which he did not know. Hence he called it X-ray; which name is as appropriate to-day, for we are still in ignorance as to its nature. Long study and use have taught us that it is a very valuable therapeutic agent in skilled hands. Like all new agents, after a few years it was reckoned a cure-all. Then it was found to be a dangerous remedy, many incurable burns resulted from its improper use, some deaths were caused by it.

Scientific men and careful observers learned that it was not a cure-all. The wave of enthusiasm began to wane. The effects of the rays were studied more carefully, and reports made, notes were compared, till now, after the lapse of twenty years, we know some of its therapeutic effects, and most of its dangers; and how to avoid the latter.

Practice and experience have taught us that the X-ray has a curative effect on a variety of morbid conditions. In doses, that are harmless to the tissues, it has no bactericidal effect. Yet it is an excellent remedy in mycotic skin diseases. This is due to the depilatory action and the slight stimulation it produces. It has a very marked beneficial effect on tuberculous processes, probably by an alleviative action. In a like manner it is beneficial in rheumatic and gouty deposits about joints and nerves. It has a specific action in epithelioma: and to some extent in every other form of malignant disease. It is a powerful analgesic. Don't cut out your chronically inflamed and painful ovaries, for the X-ray will relieve and save them. It may sterilize them for a time, but not so radically as extirpation does. Nor will it unbalance the nervous system as ovariectomy frequently does, thus leaving the woman worse off than before.

The X-ray is the best remedy we have for the treatment of aene. It cures hypertrichosis, but the applications must be heroic, till the hairs fall out. Then a cessation for three months, when it will be necessary to repeat the treatment. It may have to be repeated oftener. Can destroy the hair follicles, but may have some atrophy of the skin. But with care it will be so slight as to be a great improvement over the original complaint. Favus, when it affects the scalp is best treated by the X-ray. The object being to cause complete alopecia. Then the fungus can be eliminated by the proper medication.

Alopecia areata is treated in the same way

*Read before the Daviess County Medical Society.

as favus, with fairly good results. In neither case is the beneficial effects due to bactericidal action. In favus as a depilatory and in alopecia areata it has slight stimulating effects on the hair follicles.

The X-ray is regarded as a specific in the treatment of syphilis. The technique is the same as in favus of the face. The object being to destroy the hair follicles.

Eczema is very amenable to X-ray. The least practicable degree of penetration gives best results.

In leukemia the X-ray is the best treatment we have. It suppresses fever—when it is present—relieves night sweats and anorexia.

In exophthalmic goiter it lessens the secretions of the gland, and as these secretions are supposed to cause the tachycardia and to a great extent the nervous symptoms, all of which are ameliorated, and in some cases a cure is effected.

Tubercular glands are cured by the X-ray and no scar left to tell the tale. With a moderately hard tube and then screen the rays tuberculosis of the lungs has been greatly benefited. This result is brought about perhaps by the tonic and stimulating effect of the rays. The rays have a selective action on new and immature cells, such as we find in cancer and other abnormal growths, while the normal and matured cells have greater resisting power. This enables us to destroy the new cells of cancer without injuring the normal cells. In fact, if not carried too far the latter are stimulated to renewed action. In this way surface cancers, if treated early, are cured, and deep-seated ones greatly benefited. But no one would advise a patient with deep-seated cancer to depend on the X-ray, if it is operable. But in inoperable ones, either from their location or from too long delay, the rays will make the patient much more comfortable and prolong life.

Let me report a few cases taken at random from those I have treated.

Case 1. Miss W., tubercular glands of the neck. She was living with a tubercular mother. Glands had been slowly but gradually enlarging for 15 years. All the glands on the right side of neck from the jaw to the clavicle were enlarged. The deformity was considerable. She could not wear a collar. But wore a loose dressing to hide deformity.

She came to my office on June 20th, 1908, and continued to come, more or less irregularly till March 30th, 1909. In all, I gave her 41 treatments, scattered over nine months time, when all enlargements had disappeared. No return to this day. The knife might have cured this patient, but a very extensive bloody and dangerous operation would have been required, even then a return of the disease would have been most likely.

Case 2. Miss L. A very ugly case of acne over the face. Gave first treatment April 3rd, 1912. The last one May 20th, 1912. Fifteen exposures in 48 days. A satisfactory cure with no return.

Case 3. Miss E., aged 23, acne covering the entire face. First treatment on September 19th, 1911 and continued till December 22, 1911, making 24 exposures. As the whole face was involved I treat first one side and then the other. A complete cure with no return.

Tousey says, "Treatment by X-ray alone will effect a cure in a majority of cases in from 3 to 6 months.

Case 4. Epithelioma of lip. Cure with two treatments with no scar and no return in four years.

X-RAY AS A DIAGNOSTIC AGENT.

By M. CASPER, Louisville.

"The debt which humanity owes to the X-ray is a heavy and increasing one." This statement is made daily the more emphatic as time and genius slowly but steadily with many a bound unravels the mysteries of this new giant in the scientific world.

The Roentgen Ray was discovered by Prof. Konrad Wilhelm Roentgen of Bavaria, in 1895, almost by accident. The world of science, especially the surgical field, realized at once much of the great value of this epoch-making discovery and jumped at it with a leap, however, there was so much to learn, so many problems to work out and these facts intermingled with a few accidents in the way of shocks and burns, coupled with quite a large number of unfavorable results of the new Ray as a therapeutic agency, rather damped the ardor of most of the investigators after a brief trial. It is only recently that the advancement of the use of the X-ray especially as a diagnostic agent, has again assumed a rather high station and bids fair to ascend to a much higher plane in this field of diagnostic usefulness.

The treatment too, bids fair to gain a more accredited place in the therapeutic field; this phase of the subject we will not pretend to even touch in this discussion. The recent and many uses to which the X-ray has of late been employed in biology and commercially, would make an interesting article. For instance, a diamond is instantly distinguished from a "phony" imitation. By the use of the extremely soft rays, radiographs have recently been obtained depicting for example soft tissues of the body (showing the veins and nerves, also the wings of insects, the venations of leaves and the structure of

*Read before the Bullitt County Medical Society.

flowers), such delicate work is opening up a still deeper and more phenomenal field of research. Radio-micrography of tiny objects forms one of the latest achievements of X-ray manipulation.

The discovery of the transformer in 1908, by Snook, and improved tubes, intensifying screens, etc., making instantaneous radiography possible, with known dangers of burns and prepare protective devices along with wider application of the ray being daily developed, has rekindled the scientific worker to renewed zeal for further laurels in this realm of science. The X-ray is so muzzled and safeguarded now that only indifference and carelessness can make possible an accident or burn. A radiogram is made in most cases in from 1-8 to 1-4 second and in some instances, as quick as a 1-20 of a second, hence, the chance of burn is indeed quite small even after many, many exposures or series of pictures.

The use of screens and the Coolidge tube has made Fluoroscopic work very practical and immensely valuable as a diagnostic agent. The importance of the fact of the use of the X-ray in possible injuries of bony structures from a medico-legal standpoint, is too well known to dwell on it here. Suffice it to say any Surgeon who has failed to seek the aid of the X-ray is at once placed in a most embarrassing position and his testimony at once proportionately discounted. This state of affairs is rather unfortunate in some instances and though the recognized value of Radiography is indeed very great, still this greatness does not approach anything like the greatness that dwells in the mind of the average juror. On the other hand, we have heard some doctors try to discredit the value of radiography giving as a reason, that it shows the trouble too plainly and often graphically illustrates the doctor's own shortcomings. This complaint is too thin to require any comment. The Roentgen ray has put diagnosis at a sudden bound far in advance of the treatment, nevertheless, we all know that the genius in modern surgery will improve our treatment and quickly find a way to successfully overtake this advancement in diagnosis.

We can hear frequent murmurings that the chapter on fractures must needs be rewritten in the near future, and many new and ingenious devices and appliances are being rapidly brought out to the more scientifically treat fractures. None of us are infallible, how decidedly the X-ray has brought this fact home. It has indelibly impressed us and we must sublimely bow to the giant master. For simplicity of study this subject can be conveniently divided into two parts:

- First: Diagnosis of trauma or accident.
- Second: Organic conditions.

The first group would include of course, all fractures, dislocations and injury to bones, foreign bodies and other conditions due to accident or trauma. This part of the subject has stood on reognized and sound footing almost ever since the advent of the X-ray. Improved technique and expert handling of these cases has constantly increased the value of the ray in even this early explored field of its usefulness. The recent work with the stereopticon methods of accurately locating bullets and other foreign materials has proved great value. Most surgeons now will not diagnose or treat a fracture without the aid of the Roentgen ray and still less will he be responsible for the end results without such aid. The more one sees of fractures under the fluoroscopic screen the more he is impressed with possible errors in diagnosis and hence correspondingly faulty treatment. Many apparently simple sprains have gone unrecognized and thus improperly treated to the future discomfort and disadvantage of the unfortunate sufferer. This is doubly true if the injury is around a joint. Also the more especially if injured part is greatly swollen, extravasated with blood or tender and painful, for then is the X-ray a valuable asset in diagnosing the cause, surely, safely and painlessly.

Another important time to use the Roentgen ray is about the end of the first week for then should the position be faulty, it will still be time to remedy it. It is so unfortunate that laymen have gained the erroneous idea that a fracture must have immediate attention. This notion is sometimes unwittingly assented to by the attending physician. The fact is we gain nothing by haste and anytime in the first 48 hours is just as good to reduce a fracture, if not better in some instances; we certainly should delay any interference till reaction from shock is complete.

In X-ray diagnosis one very important point on which we must insist is that the radiographer be skilled in the art. He must be a good anatomist first and foremost. Comparatively few men can correctly interpret a Roentgenogram and quite a few mistakes have been made by amateurs in this new art. These errors in the past have been mostly excusable for the X-ray has taught quite a bit of anatomy; this is especially true of the abdomen, for structures are often found quite differently arranged than so graphically illustrated in the text books.

It is in the second division of our subject where most advancement has been made recently. We glean valuable information by roentgenology in diseases of all parts of the body, truly from head to foot inclusive.

Radiography of the head is being rapidly perfected and many interesting points of

diagnostic value can be cited. In McCord's work on "Pituitary gland research," he finds the X-ray picture of the sella turcica of great diagnostic aid. And to a greater extent in studying sinus diseases, including frontal, sphenoidal, ethmoidal and antrum. Also in brain tumors, abscesses and even insanity it is of great value and being used now routinely in many hospitals.

Dental film radiographs greatly aid the dentist in many otherwise obscure conditions and diseases at roots of teeth. Also in unerupted teeth and just to determine if alveolar process is large enough to accommodate permanent teeth. As the expansion of the lung and raising and lowering of diaphragm is readily observed under fluoroscopic screens, it really opens up the chest to a fuller diagnostic view. Tubercular deposits can be detected before any physical signs are present and enlarged lymph nodes in mediastinum, adhesions of pleura, pus in pleural cavity, etc., can be observed.

As each heart beat is rendered plainly visible, the value of the screen is displaced, enlarged or diseased heart is at once recognized. Renal and bladder calculi and in many instances gall stones can be photographed and their size and location accurately determined. The size and position of the pelvis of the kidney and course of the ureter can be outlined. Brash by his pyelography can diagnose tubercular and inflammatory kidney.

Probably the greatest advancement in radiography is that of the alimentary canal which by the aid of the bismuth or barium test meal is most accurately radiographed and most lesions readily ascertained. We mention as examples, diverticuli of esophagus or colon, ulcers, stenosis or obstruction and dilatation, adhesions, kink, concretions and displacements. Visceroptosis and its many complications and tangled symptomatology is a pathological state that has passed unexplored till radiography opened up the field and much of value has been accomplished in this direction alone. To differentiate pregnancy from tumors, the X-ray is infallable as well as to determine presenting part.

The diseases of bones and joints are made like an open book now from a diagnostic standpoint, thanks to radiography. Caries, periostitis, osteo-myelitis, bone tumors, tubercular joints or bones, early Pott's disease, distorted joints, bones, bunions, etc., all are accurately diagnosed now and consequently much more scientifically treated.

CONSERVATION OF HUMAN LIFE.*

By BEN P. EARL, Charleston.

The desire to live is innate in every human being. The loss of this desire and of the ambition to struggle for the preservation of life is almost proof positive of mental derangement, or at least of unbalanced mind. The giving of one's life voluntarily for another is rightly regarded as the acme of human sacrifice, and is so pronounced in one of our Savior's most precious utterances—"Greater love hath no man than this, that he lay down his life for another."

One of the greatest resources of our Nation is the life and health of its citizens. Conserving life and health means efficiency in work, in wealth and in power, and is a matter for the deepest concern. As physicians we are entrusted with the guardianship of this most important resource. As the keepers of public health, how are we to act, and what is our duty and our whole duty?

As a base for any answer to this question, we may well inquire what is the average life? What is the average health? And what can be done to conserve these? Vital and health statistics have not been closely kept in most States, but wherever they have been kept they are great factors in determining the life expectancy. From many sources facts have been gleaned which show most conclusively that where hygiene, sanitation and preventive medicines have been applied, there is great increase not only in length of life but in the efficient work possible to the individual.

In India, where there is practically no knowledge of these subjects, the average of life is stationary at twenty-five years or less. In Sweden it is over fifty years, in Massachusetts forty-five years. Germany has, in the last century, increased the life average at least seventeen years, and this is based on more accurate statistics than are kept by most nations, and remains true despite the several wars. In all Europe the average life has doubled in the last three and a half centuries. Small-pox and yellow fever are now well under control. Tuberculosis and typhoid are well understood and will decrease rapidly as the average citizen is taught preventive medicine and the laws of hygiene. Infant mortality is reduced by pure food and careful handling until it is only criminal ignorance or indifference that is responsible for any large number of deaths among infants. Such a visitation as the great plague in 1348-49, which killed three-fourths of the population of England and Europe will never be even possible again unless there is some general break down of civilization.

*Presidential address delivered before the Southwestern Kentucky Medical Association.

Life is shortened by death and narrowed by invalidism. The ideal life would be free from illness and disability of every kind. To approximate such an ideal is the aim of hygiene. It is usually true that the healthier a life, the longer it is. Humboldt maintained that he had lived four working lives by retaining a working power double the average for double the average number of years.

It is contended that for every death there is an average severe sickness of two years. This would mean that as throughout the United States there are about one million five hundred thousand deaths annually, there will always be about three million persons on the sick list. This is equivalent to thirteen days per capita.

There are constantly ill in the United States of tuberculosis about five hundred thousand persons, of whom about one-half are totally incapacitated while the remainder are half incapacitated. The causes of various diseases are closely interwoven. Professor Sedgwick tells us that "Hazen's Theorem" shows that for every death from typhoid fever avoided by the purification of a polluted water supply, two or three deaths are avoided from other causes. Hookworm disease in the South is a great cause for incapacitation and is responsible for a great percentage of sickness and poverty. The disease is preventable by sanitary measures, as well as curable by proper drug treatment of victims.

The social diseases which are certainly preventable are one of the gravest of the menaces to national efficiency. Dr. Morrow says that their extermination would probably mean the elimination of at least one-half of our institutions for defectives. Alcoholism and drug addiction are also responsible for many insane and defectives. The feeble-minded, paralytic, blind, crippled and deaf mutes form an army that in the aggregate is most appalling. By far the greater part of these terrible afflictions are preventable.

The plain duty of physicians is to enlighten and educate this generation on the causes of the greatest afflictions known to humanity, to preach prevention and hygiene, while relieving the primary suffering caused by ignorance and preventable disease.

No less important is the physician's duty in regard to educating his patients as to the dangerous consequences of many minor ailments. These are the gateways to more serious diseases. For instance, a neglected cold leads to pneumonia and then to tuberculosis. No statistics of minor ailments exist, but physicians who have opportunity to know place the disability resulting from minor ailments at three or more days in the year. Out door life, reasonable recreation, public and private hygiene, the avoidance of hurry and hustle

with the consequent nervousness will do much to relieve minor ailments and their attendant train of more serious diseases.

The importance of preventing undue fatigue is not well recognized. The economic waste from undue fatigue is probably much greater than the waste from serious illness. This is due to the greater number of people involved and also to the fact that the greatest sufferers are the victims of child labor and those women who are forced to work overtime. Fatigue is a forerunner of colds and other minor ailments. It is a chemical effect produced by "fatigue poisons" in the blood. Among the worst of these poisons are alcohol and tobacco, and the most effective work is not compatible with the use of either.

A wise and far-sighted economy will lead the Nation to conserve its vital resources in every possible way. These resources depend on two primary conditions—heredity and hygiene, conditions preceding birth and conditions during life. A sound physical and mental inheritance is a greater asset than the inheritance of extraneous advantages like wealth.

The benefits of improved heredity can be enjoyed only by future generations. But we of the present day may conserve our vital resources through hygiene practiced in one or all of three ways—public, semi-public and personal hygiene. The first refers to government, regulation of health, the second to professional or institutional care of health, and the third to the private life of the individual and the family.

Every city now has its health board. Yet few citizens realize that the protection rendered by these boards is more important than the protection by police or fire departments. Much is done by these boards, but there is enormous room for improvement, both in making regulations and in enforcing them by the aid of a more enlightened public opinion. Pure air is one of the primary necessities of life, yet only a small fraction of our countrymen actually enjoy it. Pure milk is another prime necessity. Proper drainage and garbage removal and clean streets are needed. The transmission of disease by flies, insects and vermin needs to be checked. In a word, proper inspection of food and every day necessities and intelligent control of epidemics is the ideal of our health boards.

Semi-public hygiene comprises that relating to institutions such as the Pasteur, Rockefeller and Carnegie Institutes, while the research laboratories of the government and the universities offer a most promising means of increasing this most useful knowledge. Medical schools in their training of physicians are dispensing the further knowledge of hygiene and preventive medicine, and are improving

as they develop these two subjects which are now in their infancy.

Hygiene of schools is a very important matter. It is world-wide in its application and influences life at its beginning. How to equip a well-stored mind without weakening the body is worthy of the attention of the most skilled physician. Germany, the leader in so much of the progress of the past two decades, has gone to the extent of providing open air schools in the pine woods for weakly children. Every hour is regulated, the diet prescribed and with close medical inspection twice a week these children often outdistance the stronger children in the regular schools while constantly improving in health.

Personal hygiene is not only of direct importance to the individual, but furnishes the public opinion from which, and from which alone, sound public hygiene can spring. In fact, public hygiene will be ineffective unless supported by personal hygiene. Milk and water supply of a city may be ideal as supplied at a dwelling, but may be carelessly contaminated there. Observation shows that many of the world's most vital men and women have practiced hygiene and turned weak constitutions into strong ones. Corneo, the Venetian nobleman, about to die at thirty-seven adopted the temperate life, taking especial care not to over-eat, lived to be nearly or quite one hundred. Instances might be multiplied. Horace Fletcher in our own day, who has at least added a word to the dictionary, was refused life insurance as a poor risk. After forming regular and temperate habits and "fletcherizing" his food in eating, was years later accepted without a question. Personal hygiene comprises hygiene of environment, air, soil, dwellings, clothing, food, activity, baths, etc.

Man was originally an out-door animal. Civilization had brought him indoor environment and with it tuberculosis and many other germ diseases. It was doubtless due to out-door life, as well as to the general slowness of the times, that the patriarchs reached the great ages ascribed to them. All the generations from Adam to the flood were eleven; of all these Adam was contemporary with eight, Seth with nine, Enosh with ten, Cainan, ten, Mahalaleel ten, Jared ten, Enoch nine, Methuselah eleven, Lamech eleven, Noah eight, Shem and brothers four. Lamech, the father of Noah, was contemporary with Adam for fifty-six years and lived on with the children of Noah for ninety-three years, dying just a few years before the flood. Shem in turn lived until Jacob's time, and Noah himself lived well into Abraham's time. From erection to the flood was about two thousand years, yet it must have seemed like yesterday to these hale old men. The world has prob-

ably progressed more since the time of George Washington than during all those two thousand years, yet it is interesting to speculate on his impression of things of the present day, for had he possessed any such lease on life, he would have scarce reached middle age, while Columbus would be still hale and hearty though he might find his breath taken by submarines, fast trans-Atlantic travel, etc.

Drug habits, poisons, tobacco, alcohol all come in for their part in personal hygiene.

So far as we can judge from statistics of the average duration of life, it has been gradually lengthened for the past three centuries, all of which is due to hygiene and preventive medicine.

I must come to a close, as I find this subject so voluminous and the field so wide that further consideration is impossible.

Now in conclusion: May we so live that be the time long or short

"That when the summon comes to join
The innumerable caravan that onward moves
To that mysterious bourne whence no traveler
returns,

When each shall take his chamber in the silent
halls of death.

Thou go not like the quarry-slave at night
Scourged to his dungeon, but sustained and
soothed

By an unfaltering trust like one
Who wraps the drapery of his couch about
him

And lies down to pleasant dreams."

Sodium Bicarbonate Edema.—L. A. Levison, Toledo, Ohio (Journal A. M. A., Jan. 23, 1915), reports two cases of marked edema following the administration of considerable quantities of sodium bicarbonate; in one, the disorder was diabetes and in the other the diagnosis was ulcer of the stomach or duodenum. The literature of sodium bicarbonate edema in diabetes, which is, as shown here, the result of the prescriptions of the drug is discussed. The effect is not confined to diabetic cases. It has been shown that the diabetic retains chlorids in water under these conditions in proportion to the conditions of the kidneys and the degree of acidosis. The amount necessary to produce the retention of chlorids has been determined experimentally to be 20 gm. or more daily. This is larger than the usually prescribed therapeutic doses in stomach affections but may be much below the amount given in threatened diabetic coma. In a general way, the chlorid retention is not proportional to the amount of sodium bicarbonate ingested, but that is not all. In cachectic and toxic diabetes, cases with poor renal elimination, and emaciated subjects, are liable to this retention much sooner than those with fair nutrition and good elimination.

NOTES ON TWO HUNDRED AND FOUR CASES OF LABOR WITH TWO HUNDRED AND EIGHT BIRTHS AND SOME OTHER NOTES.*

By J. F. JONES, Mt. Sterling.

I will take them up according to the Biblical saying, "The first shall be last and the last shall be first." So I will take some other notes first.

On the afternoon of Christmas Eve, it was about 3:30 o'clock, I came in home and my wife said to me: "There is something a young man brought here for you." On a chair I saw a long box and I said it is some friend sending me a cane expecting to make a dude out of me: if that is the case I am afraid he gave the cane to the wrong fellow, for I am not dude enough to carry a fine cane."

I opened the box and found a fine umbrella with a gold handle and inlaid with pearl, and I was puzzled to know who thought enough of me among my patients, and which one of them had sent it to me. I soon saw the inscription on the handle, and it is this: "Dr. J. F. Jones from Montgomery County Medical Society, December 25th, 1914." It was entirely unexpected and very much of a surprise to me.

My first thought was why the Montgomery County Medical Society gave me this. Then I remembered that for several years I have been the secretary and have tried to do what I believed to be my duty as secretary, and several times I have been tired of my job and said to myself, I will not be secretary again, and if they elect me I will refuse to serve, and at the last meeting I was elected against my consent and when several members said to me "You are the only one that will attend to it," I thought, and still think, that they were casting a slur on some other member that might make a better secretary than I have been.

The umbrella is a beauty and the quality first class, and I assure you that I appreciate it and feel very thankful to you for it, but the appreciation of the gift fades away and is insignificant when compared to the motive that caused the bestowing of the gift. It is the esteem that my professional brethren have for me and their appreciation of my services as secretary of this society that is of far greater value and appreciation to me than any gift they could bestow upon me; and while I appreciate the gift and again I thank you for it, but please remember that far above the gift is your motive that caused the giving which stands first in my estimation.

To me this umbrella will be a shelter from

the rain and a screen from the sun, but sometime "We shall reach the river side" and when that time comes for us "to pass over the river and rest under the shade of the trees," my prayer to our God is that we may all meet "over there" with the "Great Physician" as our President.

As "the first shall be last" I will now take up the first: "Notes on Two Hundred and Four Cases of Labor with Two Hundred and Eight Births." In these there were four pairs of twins. Of these in one case the presentation and position are not noted. In one the first child was a breech and feet presentation and first position; brought down the feet and delivered; the second one was a vertex presentation and second position. In each of the other two cases the first child was a vertex presentation and first position; in one the second child was a vertex presentation and second position; in the other the second child was a breech presentation and second position. This child was born with the amniotic sack intact and I ruptured the sack after the child was born; the only time that I ever had this to occur.

In all of these cases each child had a separate placenta, but in one the placenta was united about half way across. In one case, as I followed the fundus as the second child was born, I thought I had found the head of a third one but when I examined for it, I found a fibroid tumor and I missed the only chance I ever had for triplets.

In some of these cases I was like the Irishman that the train left: I went fast enough but did not start soon enough, and thirty-eight children were born before I arrived. I think it is safe to say that all of these were vertex presentations, and the majority were likely in the first position.

Of the vertex presentations 116 were in the first position; 40 in the second; three in the fourth. As the fourth rotates into the first, I changed these fourth to the first position this makes 119 born in the first position of the vertex; 40 in the second, and assuming that the 38 mentioned above were vertex presentations we have a total of 197 vertex presentations out of 208 births. There were two face presentations, one in the first, the other in the second position. I will take these up again later on. There were five breech presentations, three of them in the first position and two in the second. There were two transverse presentations; in one the right shoulder presented with the back of the child to the mother's abdomen. In the other the left shoulder presented with the child's back to the mother's abdomen. I will take these up again later on. In two cases the presentation and position are not noted. In one of the vertex presentations the right hand was down

*Read before the Montgomery County Medical Society.

and presented with the vertex; this case had a rigid os that did not yield for twenty hours. In another vertex presentation both hands were down and presented with the vertex. In this case the amniotic fluid had been passing for three weeks before the labor pains came on. In ten hours the head descended to the perineum. Used forceps to deliver. In one other case I used forceps; only two cases in two hundred and four that needed forceps.

In twelve cases the umbilical cord was around the child's neck. In eight cases the cord was around the neck once; in two cases it was around the neck twice; in one case it was around the neck three times; in one case it passed around the right side, going behind, across the back, under the left axilla to the front, across the breast up to the right shoulder, and around the neck four times. Cord was about four and a half feet long. In this case there was a large quantity of amniotic fluid. Inside of the amniotic sack was another sack. Where it was attached to the placenta it was about one and a half inches in diameter and extended along the cord about eighteen inches and was about six inches in diameter at the top. It was ruptured when I first saw it. I have seen one other case with an inner sack similar to this.

There were three children with cleft palate, one on the right side, one on the left. This child had no alveolar process to the left superior maxillary bone, no palate on the left side and hare-lip on left side. When the mouth was closed the tongue protruded through the opening in the jaw and lip. Could not nurse the breast at all and in about one week died from starvation.

The third child had cleft palate and hare-lip on both sides. The alveolar process extended through the openings in the lip and the lip was attached to the end of the nose and to the septum. It died in about a week.

One child, its bowels did not move at all; gave it castor oil and an enema; the water returned at once. The abdomen distended and it died in a few days. The rectum was not developed, or it was obstructed by a lymph band. In one case the placenta was very adherent, had to peel it off with my fingers. In nine cases there was a battle door placenta.

In two cases there was placenta previa. One at seven months; complete. Had to take the child to save the woman. The other case I saw with Dr. Cox. It was at full time and complete. After working all night we delivered a still-born child, but saved the woman. Both of us looked like we "had been to a hog killing," we were both covered with blood.

In four cases there was severe post-partum hemorrhage; in one the child was born be-

fore I arrived and the blood had run off the bed on to the floor and she was unconscious. I gave her a hypodermic of ergotin and strychnin, elevated the foot of the bed, then passed one hand into the uterus, cleaned out the clots and caught the fundus with the other hand. The hemorrhage was soon controlled and she made a good recovery. In two others the hemorrhage was severe but not hard to control.

The fourth case inertia seemed to have taken possession and would not surrender. After large doses of fluid extract of ergot by the mouth and ergotin and strychnia hypodermically and holding the fundus with my hands about three hours the uterus finally contracted.

There were four cases of lacerated perineum. These I always repair inside of twenty-four hours. One woman had been married nine years; this was her first pregnancy; she gave birth to twins. Her breasts never enlarged at all and the areola did not change color and she never had any milk at all. I have never seen or heard of a similar case. There must have been some anatomical defect in her nervous system between the uterus and the breasts, is the only way I can account for this unusual occurrence.

Another rare occurrence was a case where the child was born at 6 A. M., at 12 o'clock, noon, all lochial discharges had stopped and never returned. My anxiety was very great and I was on the watch for bad symptoms to appear, but they did not come. I never had a case to do better. This was her second child she told me the same thing happened with her when her first child was born. In reporting this case the late Dr. Drake said that he had had one similar case and one case is reported in Cazeaux's Theoretical and Practical Midwifery. These three are all of the kind that I have heard of.

There were two cases of very rigid os: one yielded in twenty-four hours, the other held on about fifty hours. This case had one unusual feature. When the labor pains first started the woman had a very severe pain in the left knee and this pain continued in rhythm with the labor pains until the child was born; then the pain stopped and did not occur again.

One woman I was with when her fourth child was born; it was born at eight months and still born. This was her fourth pregnancy all of them terminated at the eighth month and all were still born. I treated her during her fifth pregnancy which went to full time and she had her fifth but first living child. This child lived about a year and died of pneumonia.

I will now take up the face presentations again. The first case I saw with Dr. Cox.

The woman had been in labor about twenty hours. First position and os dilated but the face would not engage in the brim. Though I had never seen or heard of it this thought came to me: Knowing that at the beginning of labor if the head is flexed there will be a vertex presentation, if the head is extended there will be a face presentation. This was a first position of the face. This was my thought and I made this suggestion:

If we can flex the head we will change from the face presentation and first position to a vertex presentation and first position. Give this woman an anesthetic, then have two women with their backs to the bed then put the lower legs of the patient over the shoulders of these two women and lift the patient so that she will rest on her shoulders on the bed; the amniotic sack is intact gravity will take the child to the fundus of the uterus. While in this position I pass my hand through the cervix, pass it over the vertex and flex the head. I will hold it in that position then let her down on the bed and I will hold it there until the labor pain comes on. I never saw or heard of this being tried but I believe it will work. Dr. Cox accepted the suggestion: he gave the anesthetic, we went through with the suggestion, it worked fine, we got the vertex presentation with first position and in a short time the child arrived, but was still-born. The next time, and I have had but one face presentation since, I endeavored to change it to a vertex presentation and succeeded. I hope I will not have another, for in the next I might not do so well.

There were two transverse presentations: one in a primipara, the right shoulder presenting with the child's back to the mother's abdomen. When the os was dilatable gave an anesthetic, pushed the shoulder up and brought down the feet and delivered. Worked with the child about an hour before respiration was well established; it lived about twenty-four hours.

The other case was a multipara. The child presented by the left shoulder with the back to the mother's abdomen. She was a large woman and there was a large amount of amniotic fluid; as soon as the os was dilatable, I passed my right hand through the cervix and pushed the shoulder up, at the same time an assistant with the right hand on the left side of her abdomen pushed the breech up, while I had my left hand on her right side and pushed the head down. The child turned easily and showed a vertex presentation and first position. It was born in six hours after turning.

In these two hundred and four cases I was with sixteen women in two confinements. With ten of them each time the child was a vertex presentation and first position. In

three the first child was a vertex presentation and first position. In three the first child was a vertex presentation and second position. In three the second child was a vertex presentation and first position. In three the first child was a vertex presentation and second position. In three the second child was a vertex presentation and first position. In one the second child was a vertex presentation and second position. In one the second child was a breech presentation and first position. In one the second child was a breech presentation and second position.

Four women in three confinements. Two of these each time was a vertex presentation and first position. Two of them each time was a vertex presentation and second position. Three women in four confinements: one of these had twins the first time. The presentation and position of these are not noted. The third and fourth child were each a vertex presentation and first position. On one the first and second child were a vertex presentation and first position; the third child was a vertex presentation and second position, the fourth child was born before I arrived.

In one the first child was a vertex presentation and first position: the second, third and fourth were vertex presentations and second position.

I had only one case with convulsions in the two hundred and four. She was a primipara. She had seven convulsions before I saw her and three afterwards, and they were severe. She was unconscious when I first saw her and for twenty-four hours afterwards. I gave her twenty grains of calomel in a tablespoonful of castor oil, then five drops of Norwood's tincture of veratrum every hour hypodermically until her pulse fell to seventy and then gave it as needed to keep the pulse down. She had no more convulsions after her pulse came to seventy. On the fourth day labor pains came on, the child was still born; she had no more trouble and made a good recovery.

In every case of labor as soon as the soiled clothes are removed I always apply an abdominal bandage with a compress over the uterus and I put it on tight.

In the two hundred and four cases the youngest mother was fourteen, but was full grown and well developed. In the two hundred and eight births there were one hundred and ten boys and ninety-six girls; two that were still born the sex is not noted.

In the two hundred and eight births there were seven still born.

In the two hundred and eight births one was the twelfth child of its mother and one was the thirteenth: these two women were very prolific but not equal to Mrs. F., an aunt of my mother; she was the mother of

seventeen children, nearly all of them lived to be grown.

As prolific as Mrs. F., was her neighbor Mrs. H., was ahead of her and so far as I know, Mrs. H., still holds the record of Montgomery county, though she has been dead fifty years. I have not heard of any one taking the record from her. In her day she seemed to be very proud of it as she would say "I am the mother of twenty-six children."

If these four women had lived in France, their names would have been on the honor roll of the pension department, for they certainly earned and deserved a pension, which none of them received.

THE DUTY OF PHYSICIANS TO THEMSELVES, TO THE PROFESSION, AND TO THE LAITY.*

By W. G. KINGSOLVING, Eddyville.

The physician should be competent, should be moral, should be a gentleman in the truest sense of the word, and he should have his whole soul in his work. The responsibility resting upon him is wonderfully and fearfully great; unsurpassed by any other avocation: and I am afraid a great many do not feel and realize the fearful responsibility placed upon them.

Every physician should take care of himself and family. Surely every laborer is worthy of his hire. Surely the great requirements and importance of a physician's work demand that he should be properly rewarded for his services. Surely every doctor should try to collect his bills, and the people should be willing to pay him well, so he could more efficiently serve them. But instead of that, the doctor is generally very poorly paid and has a hard time to get the meagre sum he does get. This should not be, and the doctors are mostly to blame for it, because they will not work together and for each other.

It is said that \$750.00 is the average wages of doctors. This is less than the brick layer, less than the guards receive at the penitentiaries. They receive \$75.00 per month and do not have to spend any money to educate themselves; no money spent in college as a preparation—just so they can handle a gun, they are well paid for their work considering the requirements of qualification. The daily laborer receives a dollar or a dollar and a half a day, and considering his expenses, he is better paid than the average doctor; and yet you often hear people say the doctors extortion upon them, rob them. This shows that the people are ignorant about the real conditions

existing and that physicians fail to properly teach and train them, and physicians, instead of working together like brothers ought to do, work against each other, cut prices and undermine their brother doctor in many ways. This should not be. We should all strive together to eliminate this terrible curse to our profession.

A short time ago I knew a doctor who did a large practice. He was a jolly good fellow, a good physician. He went night and day, cold or hot, and wore himself out, but when he died he left nothing for his family to live upon, and those who never paid him their bills did not honor him as much as if he had forced them to pay their just debts. By these careless business methods he brought want and distress upon his family and an untold injury to the profession by training his patrons to be criminally negligent about paying their doctor bills.

Another good physician 85 years old, died a few years ago. He was a good man. He had practiced 55 or 60 years. The people owed him perhaps \$50,000. He never tried to collect any money. He said he did not expect his reward here. He expected it in heaven. By this foolishness he ruined the people and when he died he did not have enough to bury him decently.

I had some experience with this good old careless doctor. I was in an adjoining community to him and when I would get in earnest about some of my tardy patrons paying their bills they would quit me and go to this peculiar old doctor and get him to do their practice and I would lose my bill. But finally this good old man died and went to heaven and then, thank the Lord, I had the advantage of some of these dead beats and forced them to pay and they were ever afterwards as good as a national bank.

These two doctors serve to illustrate a condition that is very prevalent in our ranks. So many doctors will not collect their bills, because they want to be popular and beat their competitor, money or no money. The people learn this and go from one to another and in this way many people never pay a doctor bill. I have had patrons quit me and employ other doctors because I insisted that I be paid, and these doctors gloated over receiving these patrons when they were bound to know that these patrons were infernal dead beats.

So many doctors are proud of an extensive practice whether there is any pay or not. In this way they uphold dead beats, bring poverty and want upon themselves and families, injure every other physician and degrade a noble profession.

Again so many doctors will cut on prices and jockey on fees, like a low down horse jockey will jockey in trading his plug horses.

*Read before the Southwestern Kentucky Medical Association.

I have known doctors to agree on certain prices, charge these prices, then on settlement cut the bill one-third and swear the patron to secrecy and say confidentially, "This is the regular prices we physicians charge but being it's you, I will knock off one-third; but don't you say anything about it."

The low down political demagogue is one of the lowest wretches in existence. He drinks with the drunkard, he gambles with the gambler, he will bribe and be bribed, among sinners he is a ring leader; when among Christians he is very righteous. He pretends to have extreme love for everybody, kisses all the babies, gives nickels and dimes to nearly every child he meets, compliments all the women and pats every man on the back—a pretended friend to everybody, but at last you find him to be a selfish, deceitful wretch, a friend to nobody and a curse to the people.

I have heard of doctors having "lick-logs". They would practice every fiendish trick of the demagogue. They would keep whiskey to treat the drinking classes, pet and kiss and fondle every child, compliment and flatter the women and almost hug every man in their solicitation for practice.

Then they are always on the alert. If any doctor has a settlement with any of his patrons and if there is the slightest dissatisfaction about the charges, this medical demagogue is "Johnnie on the Spot" ready to do the practice much cheaper and he claims much better. He enters into the confidence of the patron and gains the practice through deceit and duplicity.

In this way our profession is degraded and we are dragged down by the slime and corruption of the traitorous demagogue.

You may denounce the advertising quack and pass laws to check him in his dubious ways, but he is nothing to compare with the snide that is in the regular ranks and claims to be an honest physician, but is a hidden devil and works under cover to despoil his professional brother and deceive the people. The advertising quack stands upon earth and you have some chance at him, but this demagogue that gets into our ranks, "a wolf in sheep's clothing," is like a mole that burrows in the earth and undermines everything that is good and true and noble in our profession; and like the mole, he is hard to catch, because he has so many low underground caverns by which to escape when pushed by justice, and, therefore it is difficult to inflict upon him his just punishment.

This brings to my mind the Universalist preacher who preached at Scottsburg in Caldwell county a good many years ago. He preached that there was no hell, no future

punishment. After he had preached for some time he passed the hat around and took up a collection for his preaching. When his hat returned some devilish fellow had put in a button. This made the preacher mad and he at once changed his notion about future punishment. "I have been preaching there is no hell," said he, "but if there is no hell there ought to be a hell to put that fellow in that put that button in my hat."

If there is no hell there ought to be one to put the snide and traitorous demagogue in because it is impossible to bring him to justice here on earth.

CRIMINAL ABORTION.

There is a peculiar, strange notion getting into the minds of the people. It is a fact that is growing upon the minds of a great many that profess to be moral and even religious people. They would be horror stricken at the idea of murdering a man or woman, a small child or a babe at its mother's breast; but they have not the least remorse of conscience when they murder the foetus in utero. It seems that some are ignorant and do not realize that it is dangerous and a great crime, but others are well informed upon the subject and although they may profess respectability and piety they are hypocrites, and so infernally mean they don't care to murder their offspring and even solicit the doctor to perform the hellish deed.

Not long ago I was called to see a woman, pregnant for the third time. She claimed she had as many children as she wanted and was not able to take care of any more, and she wanted me to produce abortion on her like a physician over in Tennessee had done the year before. I told her no doctor was justifiable in performing abortion only to save the life of the mother and as she was in good health, we would commit a great crime and endanger her health and life to perform abortion. She was not satisfied with the advice but the husband agreed with me and thanked me for not doing as the Tennessee physician had done the year before, which caused him a great deal of expense and his wife a long term of sickness. So she became satisfied to go on with her pregnancy and left the State in two or three months after that in good health and good spirits.

Another case I remember. A young couple with one child, the wife became pregnant the second time. An abortion occurred accidentally or on purpose—I think on purpose. A severe septicemia intervened. I was called to clean up and clear away the debris. I worked hard to save the woman and finally succeeded. They were greatly pleased with my services in that time of great need, and seemed to think me a great doctor, and they were

warm and ardent friends. In about a year afterwards she again became pregnant, they became very much alarmed and said nothing would bring on the desired menstruation and that I must do something to terminate this pregnancy, that they were not able to raise any more children and if this pregnancy was not terminated they would not pay me the balance of my doctor bill. I told them that I could not produce abortion, that it was a crime, a penitentiary offense, besides being dangerous to the mother's health and life. They got mad at me and quit me and employed another doctor to wait on her in her confinement.

Now, fellow physicians, the history of such cases represents a serious condition that is taking hold upon the minds of a great many people, and it behooves all good, honorable physicians to raise their voices in condemnation of such crimes, and do all in their power to teach the people better, and do all they can to purge the profession of sneaking, hidden, abortionists and bring to justice all who commit such crimes.

Formerly it was regarded as a violation of medical ethics for physicians to lecture and instruct the people upon medical subjects. This was a serious mistake; because the more intelligent the people are upon these subjects the more easy and pleasant is our practice; and we are now giving public lectures upon sanitation, the cause of disease, its prevention and the rational cure.

It seems that the laity in general are more ignorant and superstitious upon the subject of medicine than any other. The most they have ever learned has been from almanacs, patent humbug advertisements, and the teachings of traveling charlatans. No wonder they are humbugged by every patent medicine that comes along. Hence many preachers, judges and persons in high places are often duped into giving testimonials to quack nostrums; and they often make use of silly remedies and adopt superstitious ways for the cure of disease.

I knew a learned lawyer and statesman to listen to the crazy whims of his wife and depend upon the superstitious orgeries of Christian Science (so-called), to cure a fever. Many people that in a general way are educated and intelligent, are foolish enough to believe in the faith doctor and practice many silly things to their great detriment.

This condition of affairs calls for intelligent, scientific instruction to the laity upon the prevention and cure of disease. Every county should have an all-time health officer to protect the health of the people, to urge vaccination for the prevention of small-pox, to teach the people how to prevent typhoid fever, dysentery, tuberculosis and a host of

other diseases. Every good physician should cooperate with this health officer, be a teacher of sanitation and give the people wholesome instruction upon the healing art, and try to banish ignorance and superstition out of the minds of the people, and elevate the science of medicine to the pinnacle of efficiency and honor; annul the vagaries of so-called Christian Science, eliminate the curse of quackery in the profession, and expose the medical demagogue wherever he may be found.

I love the profession of medicine and would like to see it blossom as the rose. I would like to see it held upon a high plane of universal honor and respect. I would like to see physicians work together in unity, shoulder to shoulder, head to head and heart to heart. I would like to see every good doctor well paid for his arduous work, and when he dies leave something for his family to live upon, and keep the wolf from the door. I love my country, and would like to see the people so educated that they would not be duped by quacks and demagogues, but would come up to the help of the honest doctors in the prevention and cure of diseases.

Scoliosis.—H. B. Thomas, Chicago (Journal A. M. A., Jan. 23, 1915), calls attention to certain points in the etiology of congenital scoliosis. He excludes those cases that are the direct result of bony congenital defects and includes under this head only those that have another origin than arrested bony development, hence we have left for consideration, he says, the following theories of the cause: heredity; intrauterine pressure or injury; intra-uterine paralysis; intra-uterine rickets and intra-uterine anomalies of muscles. We should distinguish between congenital and acquired characters. Histories of cases of scoliosis frequently show that other members of the family on the father's or mother's side also had similar deformity. The other causes, except the last, will be evident to anyone considering the subject. As regards the anomalies of muscles, they may give a key to the etiology and he quotes from the notes of Prof. B. C. H. Harvey as to the finding of such in the cadaver in different instances; especially anomalies must be considered as a cause for beginning asymmetry, the exaggeration of which by abnormal insertion of the trapezius muscle. Such position would give rise to scoliosis. It cannot be contended, however, that all subjects with anomalies of muscle length or attachment will necessarily have scoliosis. So far as Thomas knows this theory that scoliosis may be caused by an asymmetrical attachment of muscles has not been hitherto advanced. He offers it however, because he thinks it ought to have a place in the general consideration of the etiology of these cases. The case reported was not of this kind but was one due to bony defects. The article is illustrated.

CEREBRAL CONCUSSION AND COMPRESSION.*

By J. F. DAUGHERTY, Demossville.

In the field of surgery there is nothing that gives the surgeon more worry or more alarm than injuries of the head which may be classed as cerebral concussion or compression. For some of the worst injuries may recover while on the other hand what may at first seem only a trivial injury prove fatal in the end. Therefore, as cases have recovered after missiles have passed entirely through the brain taking bone and brain matter on the way no case should be regarded as hopeless. Again, since cases have proven fatal from what seemed only a slight injury, all cases must be regarded as suspicious. When called to an unconscious case we must first consider whether we have a case of cerebral concussion or compression, cerebral hemorrhage, uraemia, alcoholic or drug poison, ptomain poison or hysteria. We may have the symptoms of compression and concussion so merged one into the other at first we are not able to tell what are the conditions with which we are to deal. By the term cerebral concussion we mean a severe shaking up or contusion of the brain caused by violence. By compression we mean undue pressure on the brain by some foreign body, it may be abscess, blood clot, tumor, piece of bone, lead or some other foreign substance.

Symptoms of compression in general are those of paralysis, usually unilateral, breathing is puffy, vomiting absent. In concussion the nervous system and circulatory system are mostly involved. The anatomical condition of the brain after death from concussion is often insufficient to comprehend the fatal result. The symptoms of concussion range from a mere daze, to those of deep unconsciousness. In pure cases there are no paralysis often the patient is very restless, and throws his limbs about in all directions, loud speaking to him may elicit attention but his answers are mostly incoherent, there is palor, coldness of surface, sweating; vomiting is usual, which may come early or late. In favorable cases, vomiting ceases as patient slowly returns to consciousness which may be preceded by delirium. Pulse is usually feeble and fast. There may be retention of urine, sluggishness of bowels. Respiration is irregular and sometimes almost ceasing, pupils are not of much diagnostic value as to whether it is compression or concussion. The reaction from pure concussion is usually slow, the patient is apt to be dazed for some time, although the pulse and temperature may be normal. When these rebound with fever and

florid complexion, and suddenly or gradually another, but deeper, unconsciousness supervenes, it is almost certain that positive lesion took place at time of injury. Now, really compression followed by inflammation is the condition with which we have to deal.

DIAGNOSIS.

The history of the case and symptoms as detailed will enable us in most cases to reach a conclusion as to how much injury has been done to the brain. There are some conditions from which concussion is to be carefully distinguished. These are simple fracture with or without depression, compression from any cause, drunkenness and epilepsy. There may be such profound shock with fracture that at first concussion symptoms mask those of the lesion, or even keep them for a time completely hidden. There is a marked distinction between the ordinary symptoms of compression and those of concussion whether from depressed fracture or effusion as of blood in apoplexy. Here there are flushed, and often swollen countenance, stertorous breathing, slow, and it may be strong, pulse; deep or absolute insensibility and fixed pupils. The injury, if there is one, is mostly palpable and explanatory. If it is concealed the other symptoms point to the true nature of the case. The diagnosis from drunkenness is not always easy. Deep intoxication is more apt to be accompanied with compression than with concussion signs. Drunkards often have bruises on their heads, but if they have suspicious symptoms accompanying, then the patient should be kept under observation for several hours.

Prognosis in concussion is usually favorable, but if complete unconsciousness is present it is doubtful as to the individual as long as this lasts, for as before intimated, the cases that recover may present as marked symptoms as those that prove fatal. Recovery is mostly complete but not suddenly so. The after effects in any case may prove serious. There is, however, an unwarranted tendency to attribute any defect in character and even criminal deeds to a blow upon the head. The blow may be the cause of subsequent epilepsy, chronic inflammation and insanity, or imbecility. These cases have an almost continuous history of trouble from the date of injury, the manifestations varying in severity from time to time, as pathologic changes develop them.

TREATMENT.

In mild cases of concussion rest is all that is required. The symptoms should be well watched for several days to see whether any serious complication follows the injury. Again, serious symptoms may be present

*Read before the Pendleton County Medical Society.

without indicating any great gravity in the case. Children, for example, often have convulsions from the slightest cause. After injury of head they will have convulsions for two or three days and then go on to recovery. The more serious cases also require rest, hot applications to extremities, nape of the neck and over the stomach, also along the sides of the body. Stimulants should be used continuously as some unpleasant consequences of the brain may follow.

If the reaction is regular with gradual restoration to consciousness and no noticeable rise in temperature, nothing more is required than rest, cool drinks mild diet, bowels and bladder must be attended to; catheter may have to be used. Restlessness can be controlled with bromides, chloral, etc.

When reaction is followed by fever and especially if accompanied with secondary unconsciousness, give salines, ice cap to head, or blood letting may be preferred by some. Hot water in some cases 120 degrees to 130 degrees, acts well.

Treatment of compression is mostly expectant. If symptoms warrant it, trephine.

THE RELATION OF THE HOSPITAL NURSE TO THE DOCTOR, AND THE RELATION OF THE DOCTOR TO THE NURSE.*

By SARA E. DOCK, Paducah.

Some one has said a nurse is born and not made, I would like to amend that by saying, a nurse is born and then trained. Woman possesses qualities which naturally make her superior to the average man for this important work, which stands second to the medical profession itself.

The nursing profession is monopolized almost entirely by women. It's about the only thing we are allowed to do without the blame of trying to take away the work from the poor men. In spite of the fact that women are naturally adapted to the art of nursing, superintendents of hospitals often find it difficult to obtain desirable applicants for training. The possible reason for this is, the lack of home training, and that children are rarely taught the importance of obedience. In my estimation, obedience is the first law and the very cornerstone of good nursing, and here is the first stumbling block for the beginner. No matter how gifted she may be she will never become a reliable nurse until she can obey without question.

The first and most helpful criticism I ever received from a doctor was when he told me that I was simply supposed to be an intelli-

gent machine for the purpose of carrying out his orders.

As to the relation of a nurse to the doctor, there can be no relation of the nurse to the doctor other than a strictly professional one. Any other relation will mean disaster to the nurse.

By disaster, I mean that any relation not professional will lead to misunderstandings, quarrels or perhaps marriage, and in either case the nurse's usefulness as a professional nurse will be at an end. This to me is a pretty good argument why a nurse should maintain strictly formal relations toward the doctor, never forgetting that her success in the future depends mainly on the doctor's recommendation and influence.

It is true that after several years of doing private duty a good nurse receives many calls through the friends of patients, but suppose she steps beyond the bounds of professional etiquette and commits that unpardonable sin of suggesting to the family that another doctor be called in, perhaps the one she prefers and, in other ways, conducts herself unbecomingly as a nurse. Her opportunities will be limited to nursing for that one particular doctor, no matter how qualified and accomplished she may be. Instances have occurred where the physician has been dismissed and the unprofessional nurse retained (but this is very unusual). The professional career of such a nurse is bound to be short. My advice to nurses doing hospital work or private duty would be to maintain a strictly formal attitude toward the doctor.

You may not care for the personality of the doctor who is in attendance but you are bound to respect his profession and obey his orders. If his conduct is such as to offend and make it impossible for you to do conscientious work, make some excuse and give up the case.

It is always well on taking charge of a case to inquire from the doctor what he would allow the nurse to do if any emergencies arose. This is not only for the patient's safety but for the nurse's protection. As you know, there are occasions where a nurse's prompt action may save the life of her patient, but at the same time she would like to know that the means are entirely approved of by the attending physician.

After all, no matter how professional or clever a nurse may be, she will never be successful if she lacks common sense, tact, and the ability to grasp the fact that her real success depends on the little things in nursing and not on the fact that she may be able to diagnose the case.

As to the relation of the doctor to the nurse, I believe the doctors are mainly responsible for the many inefficient nurses that

*Read before the Southwestern Medical Association at Paducah., May 12, 1915.

are graduated from the smaller hospitals. The reason for this is, that doctors in smaller towns take a more personal interest in the social side of the training school, often using their influence to keep an undesirable pupil nurse in training. Then, too, it's more difficult to maintain the strict, almost military discipline which is in operation in all the larger schools.

A really good, ambitious nurse will prefer the doctor who is particular, even exacting in regard to her work. With a doctor like this an indifferent nurse will be forced to do good work for she is afraid not to. A careless doctor will make a careless nurse.

Naturally, the doctor is, or should be the nurses chief instructor. He should make it his business to know that the curriculum of the training school is, what it should be and that the pupil nurses get the practice required to make for efficiency. By the high standard of the training school both he and his patient will be benefitted.

I believe it is the doctor's duty to report a nurse who fails to carry out his orders, but first he should take the role of a kindly critic and tell the nurse of her shortcomings. If this correction fails then report the pupil nurse, or dismiss her, if she is a graduate and doing private duty. Doctors should never make excuses for nurses who fail in their duty. It is really an injustice to the pupil nurse and can do no possible good.

When you dismiss an unsatisfactory nurse tell her why, no matter if it hurts. If she is the right kind of nurse she will do better next time or be discouraged and give up the profession. When a nurse is doing private duty the doctor should see that she gets the proper amount of rest and recreation. He should also remember that while he is attending several patients, the nurse has only one patient and is wholly dependent on the income from that one patient. If her patient is at all able to pay, I think the nurse should be entitled to the first money, and the doctor should see that she gets it.

If doctors were obliged to spend 22 hours out of 24 hours with some of their irritable, nervous patients they would require a few weeks rest at Dawson Springs. Even a machine needs rest and repair. Beyond a certain amount of physical and mental strain the brain refuses to act, and I believe that many cases of neglect on the part of the nurse are due to overwork. Perhaps the over-ambitious nurse wishes to carry a difficult case through and refuses to have assistance. Such foolishness the doctor should not allow. Some doctors think nurses require flattery in order to do better work. I do not think so. After all if she is doing her duty she is doing just what

she should. It is a matter of business with her, and to her interest that she do her work loyally and well.

TABES DORSALIS AND PARESIS.*

By CHAS. H. KENDALL, Morgan.

The principle factor in the etiology of tabes dorsalis is syphilis. It is impossible at present to say that it is an indispensable element in a given case, because chronic intoxication with ergot may induce tabic features and similar degenerations. The same changes are found in pellagra, and it is at least supposable that other toxic states may lead to tabetic conditions. Since attention was first called to the parasymphilitic nature of locomotor ataxia by Fournier, in 1875, statistics on the subject have shown an increasing proportion of cases presenting syphilitic antecedents. In 1894, he states that in the examination of 750 cases he finds the percentage of syphilis varying from 87 to 93 for each hundred taken separately. Erb reported 89 per cent., Dejerine, 92 to 94 per cent., Sachs, over 90 per cent., Peterson, 71 per cent., and Church, in his 100 consecutive cases occurring in his private practice, has failed to find history or evidence of luetic infection but twice.

It is safe to say that, practically, 9 out of 10 cases are syphilitic, and that, the tenth case is open to very serious doubts if it occurs under ordinary circumstances of life. Reports of cases of tabes acquiring syphilis subsequent to the development of ataxia can not be obtained. Such immunity argues prior infection.

The tabetic symptoms may appear in from one to thirty-five years after the initial syphilitic sore, but ordinarily develop from the fifth to the fifteenth. It is a noticeable and most important fact that the apparently mild cases of syphilis, those in which the secondary features are indistinct or entirely lacking, loom largely in the histories of tabetic patients. These are precisely the cases in which an intense medication is not urged or in which faithful pursuit of it by the patient can not be secured.

It must be said, however, that cases of tabes are only too frequently encountered in which syphilis has run a severe course and in which persistent and intense medication has been heroically prescribed and faithfully borne for two and three years, and yet tabes has subsequently developed.

It is rare for tabes to develop before the age of twenty-five years, just as it is for syphilis to be acquired before adolescence. In all cases appearing in childhood, hereditary syph-

*Read before the Pendleton County Medical Society.

ilis is present. The great proportion of cases appear between thirty and forty-five. As a rule, the alleged etiological factors of tabes, other than syphilis, are the very ones which contribute to the frequency of syphilis. Thus, the male sex is about ten times as frequently affected with tabes as the female. The same proportion obtains for syphilis. But among females subject to tabes Erb found the percentage of syphilitics to be 89.5 per cent, practically the same as in males.

The race question tells the same story. In rural communities and among the orthodox Jews cases of syphilis are comparatively rare, and tabes equally infrequent. Excessive venery has been accused of producing tabes. Its relation, if any, is by the increased exposure to luetic infection it entails.

The action of colds, rheumatism, over-exertions, alcoholism, and acute fevers, has been insisted upon in former years, but we know nothing of misinterpreted cases of organic, indiscriminate, or combined cord lesions.

In other instances the accident leading to the injury has been the result of tabes, not its cause, as in falls and fractures, the result of the previously unrecognized incoordination. The question, however, is still debatable. Prince, after a critical examination of tabes cases in literature, is inclined to deny the traumatic origin of tabes. Schittenholm, after reviewing the subject and the literature, reaches the conclusion that trauma as a unique cause of tabes is not proven, but that it may aggravate the tabetic condition.

A neuropathic heredity appears to play a predisposing part to some extent. We thus not infrequently encounter epilepsy, hysteria, chorea, insanity, hemiplegia, and diabetes in the ascendants of tabetics, and even, though rarely, other cases of locomotor ataxia.

May it not be that such instances indicate an inherited vulnerability on the part of infection or portions of the nervous apparatus to the toxic effect of luetic infection. It must be evident that only a very small percentage of syphilitics develops tabes.

The bearing or occupation is that related to syphilis. Artists, lecturers, journalists, and soldiers are frequently affected, physicians and surgeons not infrequently, clergymen most rarely. Country laborers, so greatly exposed to traumatism and exposure, very seldom present tabes or syphilis.

In spite of the immense importance of syphilis in the causation of tabes dorsalis, it must be kept in mind that the nerve lesion is not comparable to the tertiary or secondary lesions and is not amenable to antiluetic remedies.

It is a degeneration showing progressive sclerotic changes that are beyond repair. Follow the views of Strumpell and Marie; we

may hypothetically attribute the ascending degenerations in the nerves, roots, spinal cord and brain to action of a syphilitic toxin which primarily affects the cell bodies of the fibres making up the afferent tracts. Edinger undertakes to explain the apparent selective activity of a toxic agent upon certain physiological nervous tracts and structures by an ingenious hypothesis. Those nerve elements which are constantly employed are most affected. Thus, the sensory tract, especially in the lower parts of the cord, the pupillary activities, the bladder function, and the intestinal field are early and commonly affected.

The hypothesis conjoins the elements of (1) fatigue, locally precipitating the effects of (2), a general toxic state. The theories as to pathogenesis of tabes are numerous and varied. Four principal ones may be mentioned. First, the toxemic theory with syphilis as the usual origin of the toxins. Second, the strangulation theory of Obersteiner and others who find the initial factor in a pial thickening, where arises the posterior roots and cord changes. Third, Marie's recent contention that the changes start in a lymphangitis of the posterior column of the cord. And, fourth, the Ersatz theory of Edinger above indicated. Orrand Rowe, while granting a hereditary or acquired weakness of the nervous apparatus, believes that the process is located in the sensory neurons of the posterior cord. They find this to be the initial point for the degenerative process.

Regarding internal treatment directed to sclerosis, mercury, arsenic, silver, chloride of gold, salts of zinc, strychnin, aconitin, atropin, and a multitude of others may be mentioned, but aside from some general tonic properties it is difficult to attribute any value to them. Ergot, first employed against a hypothetical chronic inflammation in which the sclerosis was supposed to consist, has proved itself of some value in controlling vesical disturbance, and against this feature of tabes may be employed, to avoid (with precaution) ergotism. Charcot's plan was to use it in the first three days of every week, or it may be used on alternate weeks for one or two months, then a long interval and a repetition. It should be used in good sized doses once or twice a day. Against the vesical weakness, especially the sphincteric weakness, the method of Brandt to increase the strength of the pelvic floor is of service in tabes. The movements principally useful consist of having the patient separate and adduct the knees against resistance from two to twenty times daily, at intervals twice daily, at the same time, vigorously drawing in the pelvic floor and body outlets, and in massage of the perineal muscles.

For pains of tabes and the visceral crises,

morphine is sometimes required, but the physician alone should administer it, to prevent the formation of a habit, and then only as a last resort. Ice, hot applications, sinapisms, and the coal tar sedatives should be first thoroughly tried. Of the synthetic preparations phenacetin seems the most efficient.

Blisters and the cautery to the painful region and over the corresponding portion of the cord are sometimes promptly helpful, but must be used with circumspection as healing is often faulty.

Tabetic joints are best let alone. Nothing is to be gained by cutting operations, and very little by fixation apparatus except such as enable the patient to walk. Perforating ulcers are sometimes cured by stretching the nerve to the part.

Cystitis must be guarded against. If it develops, it must be carefully combated, and self-catheterization may be taught the patient.

Urotropin in ten grain doses, twice or thrice daily, may be employed for indefinite periods to keep the urine aseptic and prevent cystitis.

The management of the individual will often be found as difficult as that of the disease. He must not expect too much, but the physician must remember that he is human and do what he can to encourage and cheer him up in the face of his distressing affliction, and to insure his faithful attention to the numerous small and exacting details of treatment. The appearance of any syphilitic process demands prompt recurrence to specific treatment.

Vibrations in Ear-Diseases.—The use of sonorous vibrations properly regulated has a stimulating effect on the metabolism of all living cells, says L. M. Hubby, New York (Journal A. M. A., Dec. 19, 1914). He gives the result of his experience with this method of ear-disease. Sonorous vibrations exercise the membrane tympani, the ossicles and muscles, the hair cells of Corti's organ, and membrana tentoria and the entire cochlear nerve system. If not overdone so to cause fatigue, the efficiency and nutrition of these structures is improved, and through the sympathetic the Eustachian mucosa is also affected. He uses the Zund-Barguet electrophone, with which siren-like scales may be produced in three timbers corresponding to three registers of the human voice—low, medium and high. The intensity of the vibrations to each ear can be regulated, and the treatment is followed by a short mechanical massage to overcome any slight numbness that may have been produced. The regulation of the intensity of the sounds is very important and must be studied and graded in each case to bring about the maximum improvement. In chronic cases he examines the ears at the start and after fifteen and thirty treatments.

TREATMENT OF DYSENTERY.*

By WM. L. MOSBY, Bardwell.

In responding to the request of our distinguished Secretary for a paper on this subject for this occasion, we trust you will accept his expectation and my desire to edify you and that the importance of the subject matter, and discussion that may follow may serve for lack of any scientific data it may contain.

"Prevention is greater than cure" hence our first duty should be directed to the protection of the well and prevent re-infection of the sick. To prevent and cure diseases a knowledge of its etiology is necessary and as my brief paper contemplates treatment only we shall not enter upon a full consideration of this division of the question but be content to merely mention the usual etiological factors responsible for this distressing disease.

In December, 1898, Shiga of Japan discovered the bacillus dysenteria and in March 1900, Flexner of our country corroborated his discovery and in May of the same year Strong of Harvard and Kruse of Germany discovered identical microorganisms which have been known by their respective names and are accepted by pathologists as the cause of "Bacillary Dysentery."

With this knowledge of the etiology of bacillary dysentery we are not only better enabled to adopt measures to prevent the spread and development of dysentery, but better enabled to successfully treat the same. The germs of dysentery are conveyed by contaminated water and other ingesta so when cases are prevailing it will be well to boil all drinking water and cook all food used well and to thoroughly disinfect all dejecta from patients and later all bedding and clothing used during illness with the same care as we would a case of acute infectious disease.

Standard disinfecting solutions as calcium chloride 4 oz to gallon of water, or bichloride of mercury 1-1000 may be used, but a sufficient quantity should be used not to dilute more than 1-10 by volume. Suffice it to say that the same methods recommended in the management of typhoid fever patients will apply to cases of dysentery, as far as prophylaxis and disinfection is concerned.

Prophylaxis by vaccination gives immunity for a period of from eight to ten weeks and its benefits should be utilized by those exposed or brought in contact with epidemics of bacillary dysentery just as is used now in typhoid fever. The dose of killed bacillus (vaccine) is from 500,000 to 1 million or more repeated on the second or third day, doubling the dose, using it hypodermically.

*Read before the Southwestern Medical Association at Paducah, May 12, 1915

Absolute rest in bed is of greatest importance as it not only conserves the strength of the patient sacrificed by frequent exhaustive bowel discharges, possible nausea and pain, but contributes to physiologic rest of the bowel by lessening peristalsis and inflammation in the colon.

Patient should be encouraged to use the bed pan and avoid frequent desire to go to stool as much as possible as the use of the commode is as unjustifiable in these cases as in typhoid fever where its power for evil is well recognized.

Proper feeding is a matter of next importance to that of rest and should receive the same consideration as in other intestinal or gastro-intestinal inflammations. We should select food that combines digestibility with nutrition and at the same time leaves the least residue after this process is ended.

In acute cases no food should be allowed for 24 to 48 hours but patient may be allowed crushed ice or a small amount of soda or lime water if nausea is present. Later we may permit the use of broths, albumen water, barley water or rice water, the latter of these may contain milk in dilution later but as milk forms curds by precipitation of the casein in the stomach we should remember that we are really administering a solid food in the form of a liquid. Milk furnishes a media for intestinal fermentation and bacterial multiplication and therefore should be prohibited in acute cases or where its use does not agree. Pasturized milk will generally agree better than raw, and peptonizing will be found useful in many cases. Prepared foods have a place where the home foods are rejected or are found to disagree. After the acute stage has terminated an abundance of pure water is of importance and adds to comfort of patient.

With the amelioration of symptoms we may cautiously increase the foods mentioned above but first symptoms of disagreement should suggest a discontinuance or change of diet to lighter or to less solid forms, otherwise we may allow in a few days soft or semisolid foods as soft eggs, soft toast, cereals, etc. As convalescence is established patient will be permitted to gradually resume a more liberal diet, avoiding raw fruits and vegetables well on until all danger of a renewal of symptoms is past.

Medical treatment is both internal and local i.e., by the bowels. Internal is largely symptomatic and will vary according to the clinical indications in each individual case.

When we have an opportunity of seeing our patient early good will be accomplished by the administration of a non-irritating purge to as completely empty the alimentary canal as possible.

Osler prefers sulphate soda or Rochelle salts, giving either in two dram doses for two doses, one hour apart and later one dram every three hours until satisfactory results are obtained.

When solid fecal matter is discharged he advises castor oil in six dram doses. Wilcox and Thompson give castor oil in one ounce doses as the initial purge, the former with 20 grains of bicarbonate of soda and the latter follows with anema of 20 drops of laudanum with 20 grains of br. potash in three ounces of water, claiming thereby to relieve reflex peristalsis.

Where malaria abounds we have found calomel our most faithful "first aid friend" and should be combined with its favorite "ally" bicarbonate of soda and to this we prefer to add a small portion of pulverized ipecac in frequently repeated doses. This treatment may need to be followed with castor oil or sulphate magnesia to complete its work of thorough elimination.

If the above measures fail to produce the desired alimentary cleansing an enema of normal saline or olive oil may be given.

Nausea will be induced or aggravated by gastro-intestinal torpor or inactivity and may be relieved by a colonic flush. Ringer recommends 1-100 gr doses of bi-chloride of mercury every two hours for nausea when present. High temperature, when present, should be reduced by cool or cold baths, reserving aconite and coal tar derivatives to more stubborn forms of fever, remembering that the intake of both medicine and food should be limited to the actual necessities of the individual cases.

Bismuth in doses of from 20 to 60 grains, is possibly our most used and best remedy and may be given from 1 to 4 hours according to indications, but we should remember that controlling bowel movements does not always relieve the inflammation and ulceration present in the colon and its flexures which is the essential pathology of the disease under consideration. Opiates have an important place in the treatment of dysentery and may be required to relieve tenesmus, pain, nausea or excessive purgation, but while we believe it is exceedingly beneficial when indicated and judiciously used we also believe it is equally powerful for harm where not indicated, so care should be exercised in its administration. Mixtures containing either the liquid or powdered forms may be used but where pain is great we may be required to administer hypodermics of morphia in 1-8 to 1-4 grain doses at intervals.

Turpentine is an invaluable intestinal antiseptic and will be found useful where we have a red dry tongue or tympany is present, as it so often is with its distressing symptoms. I

frequently combine castor oil with deodorized tincture of opium and turpentine in emulsion of acacia, including aromatic syrup of rhei, or glycerin with aromatics, to render it as palatable as possible, where healing laxatives are indicated. Frequent stools and tenesmus will be greatly relieved by enemas of tincture opii 20 to 40 drops in 3 ounces of starch water once or twice daily after acute stage has passed.

On the theory that the microorganism of dysentery were inhibited or destroyed in the alimentary canal by the presence of an acid medium aromatic sulphuric acid has been prescribed in 20 drop doses three times daily and if it has no other effect than that of an astringent, it may be useful.

Recognizing the colon as the seat of the disease local medication at once suggests itself as the direct method of treatment by the rectum but while highly efficacious after the acute symptoms have abated we may be able to use only normal salt solution, to which opium may be added at this time. The hips of the patient should be elevated, no force used in its administration, and when advisable we may pass a short catheter beside the rectal tube for easy reflow and better enabling us to more thoroughly irrigate the colon without pain to patient. We can better accomplish the purpose of the irrigation by proceeding very slowly, allowing the muscular spasm or resistance to pass away, and advising the retention of the fluid as long as possible. Later we may choose between the following remedies possessing qualities rendering them as powerful for good as any we have ever used for this purpose. Alum, one teaspoonful to the pint of water, with 30 drops of tincture of opium or tannin in 2 or 3 per cent. solution, boric acid 5 per cent. solution, salicylic acid 2 per cent. solution nitrate of silver, 1 to 5000 to 1 to 500. Chronic cases tolerate stronger solutions than the more acute and the best results follow the free, slow methods that permit the medication to come in contact with the colonic flexures where the severer lesions usually exist.

Better results are obtained from rectal medication with less pain to patient if we will use a suppository of cocaine or morphine or opium with belladonna some 30 to 40 minutes before we flush the bowel.

SERUM TREATMENT.

Shiga was the first to use the serum in the treatment of dysentery in 1898 and Flexner in 1900. They found where the serum was administered early in the disease symptoms soon ceased or rapid improvement followed but when given later, a week or more after beginning of illness, improvement after 24

hours would take place and continue on to recovery.

When ulceration is present the results from serum treatment is not so favorable as to immediate, complete recovery as when used early.

In Shiga's 510 cases, 298 received serum and 212 were treated with drugs, with a mortality of less than half with those treated with serum over those treated with drugs and with a much shorter illness.

Rosenthal has eight deaths in 157 cases receiving the serum treatment, a mortality of 5.1 per cent. while at the same time the average mortality was from 12 to 17 1-2 with those receiving drug treatment in the same community. In general it is estimated that the mortality is reduced from 10 to 50 per cent in those getting medical treatment to as low as 2 to 5 per cent in those receiving serum treatment, an argument worthy of consideration.

It has been demonstrated in practice that cases infected with the Flexner type of the disease (para bacillary dysentery) do not respond so favorably to the Shiga serum and the same observation holds good as to Flexner serum in Shiga infection, so they recommend that a polyvalent serum be used, made by alternate immunization of the horse with three different types of the dysentery bacillus.

Shiga recommends that mild cases receive 10 c.c. at one injection and severer cases receive two injections of 10 c.c. each 6 to 10 hours apart while still severer cases receive 40 to 60 c.c.

In this country 30 c.c. daily for adults and 15 c.c. for children is the usual dosage.

The serum prepared by the Pasteur Institute and the Lister Institute in doses of 20 c.c. twice a day and in severer cases four times a day is administered. Usually no unpleasant symptoms will follow the use of the serum, but urticarial eruptions, pain in joints and sometimes fever may occur after its administration.

The vaccine treatment of dysentery has not given encouraging results in practice.

In 1,742 roentgenographic examinations of the abdomen idiopathic megacæcum has been encountered three times by A. Bassler, New York, (Jour. A. M. A., March 27, 1915). Eight other cases were found in which large cecums were seen, but with bands, kinks, or some other condition, suggesting that the enlargement was secondary. As to whether true idiopathic megacæcum is congenital or acquired, Bassler does not venture to say. At present he is inclined to refer it to a bacterial process represented in an intestinal toxemia of a chronic type.

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NEXT MEETING STATE ASSOCIATION, LOUISVILLE

September 20, 21, 22 and 23, 1915

COUNTY SOCIETY REPORTS

Bullitt—The Bullitt County Medical Society met in the Odd Fellows Hall at Lebanon Junction, May 3, 1915, for the purpose of electing officers and such other business that might come before the society.

The following members were present: Drs. Lutz, Johnson, S. W. Bates, Dodds, G. W. Kirk, D. A. Bates, Harned, Ridgway, Thomas, Napper, Foss, M. Casper, Rush and Hackworth; visitors, Drs. Aud and Norman.

T. E. Craig, from Hardin County, was made an honorary member of our society.

The meeting was called to order by the President, J. S. Lutz, and, the following officers were elected for the year 1915:

Wm. S. Napper, President; S. W. Bates, Vice President; R. L. Hackworth, Secretary-Treasurer; G. W. Kirk was elected a delegate and O. E. Johnson Alternate to State Meeting. J. S. Lutz, Foss and G. W. Kirk, elected Board of Censors to serve one, two and three years respectively.

The retiring President, J. S. Lutz, who, in a few well chosen remarks, introduced our new President, Wm. S. Napper, who thanked the society for the honor conferred on him and promised to do his duty as an officer.

It was agreed that the society meet the second Monday in each month and that every third meeting shall be at Lebanon Junction and the other meetings at Shepherdsville.

The Secretary was directed to communicate with all delinquents and try to induce them to join the society

C. Z. Aud, our worthy Councilor, gave us a talk on "Unworthy Practicians and Malpractice Suits," for which we feel very thankful to him.

T. E. Craig, read a paper on "Acute Dysentery in the Adult," which was very interesting Lutz, Foss, Casper, S. W. Bates, G. W. Kirk and and instructive and was well discussed by Drs. Norman.

The society then adjourned for dinner which had been prepared for them by Dr. Napper, which we all enjoyed and feel very thankful to the doctor for his hospitality.

At the afternoon session the society listened in esteemed pleasure to a most interesting paper on the subject of "X-ray As a Diagnostic Agent," by M. Casper, Louisville, Ky, who covered his subject so thoroughly there was no room for discussion.

C. T. Thomas read a paper on "Medical Ethics," which seemed to please all present.

S. S. Foss read a very interesting paper on "Unity of Doctors," which was discussed by C. Z. Aud, Casper, Dodds, S. W. Bates and Horned.

A committee was appointed to prepare a uniform schedule of fees and report at the next meeting. No further business appearing the so-

ciety thanked the brethren of the Odd Fellows Lodge for the use of their hall and also the doctors of Lebanon Junction for their kindness and adjourned to meet the second Monday in June at Shepherdsville.

R. L. HACKWORTH, Secretary.

Boone—The Boone County Medical Society met with Dr. S. B. Nunnelley at Bullittsville, May 19, 1915.

President H. H. Hays called the meeting to order. Minutes of last meeting were read and approved.

Members present were Drs. Senour, Menifee, Hays, Hafer and Nunnelley. Visiting guests Drs. Langsdale, McKim, Coke and Crisler, of Cincinnati; Furnish, of Covington, and Walton, of Sayler Park. Other guests were Drs. Metcalfe, Crisler, McFee and Cropper.

John H. Walton read a paper on "The Moral Treatment of the Insane," which was highly interesting and brought out a hearty discussion.

Next in order was case reports and several very interesting cases were reported.

The society adjourned to the dining room where dinner was served.

Dr. John H. Walton, of Sayler Park, Ohio is to entertain the society at our next meeting, June 16, 1915.

S. B. NUNNELLEY, Secretary.

Boyle—The Boyle County Medical Society met in the parlors of the Elks Club with Dr. Jno. J. Moren, President of the State Society and Dr. R. C. McChord our district Councilor.

The following members were present: George Cowan, Fayette Dunlap, F. H. Montgomery, J. R. Cowan, Jno. D. Jackson, W. H. Smith, J. R. Steele, W. D. Sparrow, O. L. May and T. R. Griffin.

The meeting was called to order by the President, Dr. O. L. May, who called on every one present for remarks for the good of the order. Very interesting and instructive talks were made by Drs. Moren, McChord and George Cowan.

This being our first meeting for more than a year the following officers were elected.

President, J. R. Cowan; Vice President, J. R. Steele; Secretary and Treasurer, T. R. Griffin; Delegate, J. R. Cowan; Censors, W. O. Hopper, D. M. Godby and Fayette Dunlap.

The essayists for the June meeting are Fayette Dunlap and J. R. Cowan, their subjects to be selected by them and announced later.

The next meeting which will be in June will be held at Perryville and a delightful banquet will be held at the Hotel Calvert.

THOS. R. GRIFFIN, Secretary.

Barren—The Barren County Medical Society met in the office of Dr. A. T. Botts, Glasgow, May 19, 1915. Members present: Turner, Howard, Porter, Botts, Smock and Taylor.

The meeting was called to order by the Vice President Porter.

A. T. Botts not having a paper as called for in the program, delivered a splendid address on "Septic Infection, As Viewed from the Standpoint of the Surgeon." The subject was discussed by Drs. Howard, Turner and Porter, and many interesting and valuable points were brought out.

S. J. Smock reported a case of head injury which resulted in strange mental conditions, the patient being a small boy. Several cases of similar nature were reported by other members. The discussion which followed was long, and at times decidedly animated.

C. C. Howard reported the case of a man who died of brain trouble caused by an abscess, after a very short illness. He promises a detailed report of the case in the near future.

The following is the program for our June meeting:

Paper, "Cerebro-spinal Meningitis," by C. C. Turner.

Report of Clinical Cases by C. W. Froedge.

Paper, "Lumbar Puncture, Its Advantages and Dangers," by C. C. Howard.

Report of Clinical Cases by C. G. Depp.

Adjourned to meet June 16, 1915.

J. M. TAYLOR, Secretary.

Breckinridge—The Breckinridge County Medical Society met in regular session June 10th, 1915, in the office of Drs. Kincheloe with the following members present: Drs. R. W. Meador, A. M. Kincheloe, J. E. Mathews, J. A. Sandbach, J. C. Tucker, and John E. Kincheloe.

Letters of regrets from Drs. L. B. Moreman and J. B. Lampton were read. A number of very interesting cases were reported and added greatly to the interest of the meeting.

J. E. Mathews read the essay of the day, his subject being "Dysentery." He covered the ground from etiology to treatment and prognosis.

Cyrus Graham took issue with the essayist on the use of saline irrigations on the ground that it caused more hemorrhage.

A. M. Kincheloe reported a number of cases treated a number of years ago with large doses of pulverized ipecac.

John E. Kincheloe spoke of emetin in the treatment of dysentery and also in connection with rheumatism where pyorrhoecia existed. He gave some cases where he believed the emetin had given good results.

After the discussion of the papers was closed **Cyrus Graham** entertained us with a very interesting talk on the Medical Defense Branch and the importance and necessity of attending county societies. We enjoyed Dr. Graham's visit very much.

JOHN E. KINCHELOE, Secretary.

Eagle Valley—The Eagle Valley Medical Society met at Sanders, May 12th.

The meeting was called to order by the President, George Purdy, of New Liberty, at 10 A. M.

G. S. Haynes explained method and showed an electrical instrument he had constructed for the cauterization of cancers in lower part of rectum by a conduction heat.

Louis Frank explained speculum he had for the protection of urethra with this treatment. This was a very instructive talk and was discussed by all.

John R. Wathen of Louisville, had a very interesting paper on the "Diagnosis and Treatment of Duodenal Ulcer," illustrated by lantern slides.

Discussion was opened by Dr. Dowden of Louisville, referring to the medicinal treatment and diet.

J. Edward Pirrung, of Cincinnati, spoke of the after treatment of these cases.

Bernard Asman, A. D. Willmoth and **J. T. Windell** and others took part in the discussion.

Granville S. Haynes read a paper on "Unrecognized and Painful Lesions in the Rectal Outlet," showed that it was impossible to make a thorough examination of rectum just by introducing the index finger and spoke of so many neurotic symptoms being due to painful lesion in the rectum.

Bernard Asman opened the discussion.

J. T. Windell made a motion that the society adjourn to meet at Carrollton, August 11th, 1915. Motion seconded and carried.

Society adjourned.

ALLEN DONALDSON, Secretary.

Fleming—The Fleming County Medical Society met in the office of Garr, Brice & Garr, Flemingsburg, Kentucky, May 19th, 1915, at two P. M., with Clyde Garr in the chair. Members present: J. C. S. Brice, T. B. Vice, C. R. Garr, J. H. Hemler, Chas. W. Aitkin, and J. B. O'Bannon. Minutes of previous meeting read and approved. Communications were read from the American Medical Association advising the Society of a suit brought against it for \$300,000 by the Chattanooga Medicine Company and J. A. Patten, manufacturers of a patent nostrum called Wine of Cardui, and warning physicians against giving testimonials in favor of the concern. Another from Dr. A. T. McCormack, notifying us that Dr. L. S. Trusler traveling representative of the American Medical Association, would be in our country shortly to assist us in arousing more interest in our work.

J. B. O'Bannon presented a clinical case of pellagra to the society:

This man's name is George Pellit, age 42 years, farmer, married, father of eight children, health good up to blindness, family history good. His hands and neck have been breaking out with an eruption every spring for five or six years, getting well in the fall and giving him no trouble

until the following spring. It began by making its appearance about June, but has been coming a little earlier each year. This outbreak made its appearance in February. It has been mild up to this attack, he never having had to seek medical advice before, as it would disappear of its own accord in the summer and fall. He has no history of diarrhea, nor involvement of the nervous system. In 1914 with the appearance of the eruption he had, for the first time, some pain in his stomach, nausea and vomited. On a bright sunny day in February, 1915, he went up on the south side of a mountain where his boys were cutting wood and sat in the sun probably three-quarters of an hour, after which, this eruption made its appearance, but in a more severe form than it had ever been. As usual, under like circumstances, he housed himself, thinking he was sunburnt, and by staying out of it, it would disappear as it had always done before; but instead, it became more and more aggravated, and on the 26th day of April he became alarmed and sent for me to come and see him. He was emaciated, anaemic looking, pulse 80, respiration normal, no fever. His month was sore and looked as though it had been scalded. His lips were rolled out. He could not eat anything, the ingestion of food caused intense pain in the stomach and intestines. His hands and forearms, as high up as the junction of the lower and middle third, were covered with a vicious-looking eruption, scales, cracks and pustules. His neck was surrounded with the eruption, but not in such an aggravated form. There was no eruption anywhere else upon his body.

I never had seen anything like it before. It did not strike me, with force, that this man had been so badly sunburnt in the month of February. Text book descriptions would not fit it. I was ashamed to use the word "eczema". Eczema is used too often by the medical profession as a cloak to cover their shortcomings in skin lesions, and to digress, acute indigestion for gall stones, and renal colic, appendicitis, etc. The thought struck me that this is a case of pellagra. After a review of the cases reported in my State Journal (which is worth its weight in gold to one) I was forced to the conclusion that it was a case of pellagra.

Treatment: I am giving this man a treatment upon which all authorities agree, viz: rest, a nourishing diet, exclusion of bright sunlight, and arsenic in some form, as salvarsan, soda cacodylate, Fowler's solution. I put this man upon a pill containing iron sulphate dried gr. 1 1-2, potassi, carb. gr. 1 1-2, arsenous acid gr. 1-40. One and two pills one hour after meals. He has been upon this course for twenty days. In order to rest him from the arsenics, I have substituted autoserotherapy (which originated with Palmer and Secor of Gaudaloupe, Texas), the technic of which is: Put a cantharides plaster one inch

square over the pit of the stomach. Put it on at bedtime and the following morning you will have a nice blister. Take 1 c.c. of water from this blister and inject into the arm. Repeat it in seven days. As a local application to the eruption, use any simple astringent ointment. I am using plain oxide of zinc ointment. As you can see, this man has improved rapidly. Whether this improvement is to be permanent, I am unable to say until he gets by another spring. I expect him to get well.

Discussion: Dr. Aitkin, opening the discussion said, "There is no doubt in my mind but that this is a case of pellagra. Dr. O'Bannon, have you examined this man's reflexes?"

J. B. O'Bannon: I have not.

Chas. W. Aitkin: Where these patients have had the disease for some time, I find their patella reflexes are entirely abolished, as you can see in this man.

C. R. Garr: I agree with Dr. Aitkin. This man certainly has pellagra. I want to thank Dr. O'Bannon for bringing this man before us. This is a very interesting case, indeed, I may say it is of national interest. This man looks as though he is a hookworm subject also. I suggest to the doctor that he have him examined. Getting rid of these parasites, should he be infected, will greatly enhance his chances of recovery.

J. C. S. Brice: The only difference I see in this man from other cases I have seen, is the symmetry of the eruptions upon his hands and forearms. He had the pellagra collar all right. While attending a meeting of the County Health Officers in the mountains of Kentucky, the local physicians entertained us with a pellagra clinic. This clinic was honored by an address from a United States Health Officer upon the subject, and he laid great stress on the symmetry of the eruption upon both the hands and feet.

T. B. Vice: Mr. President, this has been a very profitable meeting for me. I had never seen a case of pellagra before and do not know that I would, had I missed this meeting. I think the members who absent themselves from these meetings are not giving their patrons a square deal. I thank the doctor for the presentation of this case.

Clyde Garr, the President: Gentlemen, I have enjoyed this meeting, and also thank the doctor for his effort to make these meetings interesting. Let me insist upon your preparing something each month that will be of interest. You can do it.

J. B. O'Bannon, (in closing): I will have this man examined for hookworm at once and report the findings at our next regular meeting. I thank you.

No further business to come before the society, it adjourned to meet June 16th, 1915.

J. B. O'BANNON, Secretary.

Graves—The Graves County Medical Society convened Thursday, May 27th, in the Dr. Stokes' grove, about one-half mile east of the city of Farmington.

The day was beautiful, all that could be desired.

The local physicians assisted by the men, their good wives and daughters, had made ample preparations for the comfort and convenience of the society by placing plenty of good seats, tables and ice water in the grove, for the use and benefit of the members of the society, their invited guests and the visitors.

The meeting was promptly called to order at 11 o'clock a. m. by President J. C. Sullivan, assisted by the popular Secretary, H. H. Hunt. The meeting was opened with an able and earnest prayer by Mr. Bert Cobb, after which the minutes of the previous meeting were read and approved.

There were 18 members of the Graves County Medical Society present as follows:

J. C. Sullivan, J. G. Puryear, H. H. Hunt, E. A. Stephens, J. L. Dismukes, H. A. Shelby, J. H. Shelton, R. J. Pryor, L. G. Colley, W. B. Stokes, Pat Hendley, B. F. Hendley, Geo. T. Fuller, W. P. Alexander, Mose Hurt, J. F. Kirksey, W. E. Merritt and Stanley Mullins. Visiting physicians were: W. F. Crawford, Calloway county; J. H. Grinstead, Cairo, Ill.; C. E. Purcell and P. H. Stewart, of Paducah.

The address of welcome was delivered by Dr. B. F. Hendley and responded to by Dr. J. L. Dismukes, both addresses were appropriate and entertaining. There were several scientific subjects discussed and among them was "Tuberculin" by Dr. E. A. Stevens of Mayfield, and Dr. J. H. Grinstead, of Cairo.

J. H. Shelton, of Mayfield, joined in the discussion, which was very interesting, not only to the physicians but to others present.

"Blood Pressure," a new subject, was ably discussed by **G. T. Fuller** of Mayfield. His paper was well prepared and received undivided attention by his fellow doctors.

After many remarks made by various physicians, **H. H. Hunt,** of Mayfield, was called upon to read a paper on "The Needs of a Good County Medical Society," to which he responded and read the following very sensible and entertaining paper on that subject.

Contrary to custom and unsolicited, I have undertaken in my feeble way to say a few words, which I trust will be of some benefit to the Graves County Medical Society.

"In 1897 the Graves County Medical Society was organized. Two years following, at the solicitation of the State Medical Society, the Graves County Medical Society and the State Medical Society amalgamated and became co-partners, and so with every county in the state of Kentucky. This union has been so happily perfected till to-day Kentucky can boast of the

best state and county societies in our southland. Through their organization and co-operation with the State Board of Health, we note, with a great deal of pleasure and pride, our rapid progress in sanitation and preservation of human life.

I have enjoyed the privilege and honor of being your secretary for the past twelve consecutive years and as such I have had the opportunity of seeing the needs of a good county medical society. The members of the society are but passengers on life's boat. Your secretary is the steam that propels the engine. Your president, by his sound judgment and discretion, is the pilot, who steers you from the eddies of deceit and carries you safely by the sandbars of destruction and lands you safely in the harbor of dignity, love and peace.

I care not how active and efficient your secretary and president may be, yet without the assistance and encouragement of its members no society can ever accomplish anything.

We first need the co-operation of every doctor in our county—doctors who will take an interest and can be made to feel and realize that the success of the society depends upon each individual doing his part. I am sorry to say this is not the case and may I digress here a few minutes to remark I do not think that any doctor has the right to call himself a doctor and practice medicine in any community who is not identified with the profession in his county or state society. As a rule 9 out of 10 of these fellows are quacks—unreliable and detrimental to anything that is grand or noble in the medical profession.

Another drawback to the welfare of our county society is the doctor who mails the secretary his dues for the year and feels he has done his full duty. These "rear back Davys" always find excuses not to come and are seldom seen at our society and should they accidentally attend they want it kept secret, fearing the outside world might think they are not busy.

Why gentlemen, I have been attending our county and other societies for the past twenty years and from personal observation I have found it is only progressive, active doctors in attendance and as a rule it was the laggards and the "wind jammers" that were left at home.

Someone has jocularly said, "Every doctor should have his graveyard, for in it he could easily bury his faults and mistakes," and I may add, "Every one should have his graveyard"—the lawyer, the preacher, the merchant, the laborer, "for in it he could bury his faults," his avarice, his animosities and bury them so deep there would never be a resurrection. Life is too short, time is too precious, death is too certain for anyone to harbor within his bosom these little grievances, for by so doing he is missing the real pleasure and intent of life.

Another need is the wiping out among the doctors these imaginary grievances, petty jealousies

and not on every occasion exhibit the appearance of trying to outstrip his fellow practitioner. Instead let's sow the seed of brotherly love and plant the tree of hope and let it branch out the limbs of the Golden Rule, "Do unto others as you would have them do unto you." Should we all do this the practice of medicine would be a pleasure and the medical profession would attain the glory of its own renown and the world would be better by so doing.

I would judge this paper incomplete should I fail to pay a tribute of love and memory to those sainted brothers of our society who have long ago passed into the great beyond—Drs. J. L. Dismukes, Sr., J. D. Landrum, W. A. Boyd, J. D. Pryor, S. J. Mathews, D. R. Merritt, J. D. Howard, P. W. McKeel, V. Vorees, James Hendley, A. B. Shelton. These, like thousands of others who are scattered over the length and breadth of our land, were Weeblem McLure, giving their life, their brains, their all to the alleviation of suffering humanity, and at times without any remuneration whatever except the silent consciousness of duty well done. The memory of these self-sacrificing brothers has and should always be to us an inspiration for nobler and grander achievements.

Other Notes of the Meeting.

At 12:30 the meeting adjourned for an hour to a point about 100 yards further up in the grove, where as good a dinner as was ever spread was presented to the society and their invited guests. This long white table was burdened with plenty, yea, an abundance of barbecued mutton, both boiled and fried country ham, corn and wheat light bread, pickles, coffee and a variety of country baked pies that would do honor to a king's table. Everything was well cooked and delightfully served, but before the eating began Judge D. B. Stanfield of Mayfield, delivered one of his excellent and appropriate prayers, asking the blessings of the Lord, the wisdom of the doctors and the happiness of everybody, to enjoy to their heart's content, the many pleasures of this delightful occasion.

There were perhaps in all, including men, women and children, something like four or five hundred people present and there was a bountiful supply of these good things to eat for everybody. As a side line, ice water and lemonade was there in abundance and hundreds of paper drinking cups were distributed and on them was printed "Vote for Bunk Gardner for Circuit Judge."

After enjoying this bountiful dinner Dr. W. Stokes of Farmington read an able paper on "Malaria," which was discussed by Drs. Stewart, Shelby, Stevens and various others. There was one subject on the program which was assigned to Dr. I. C. Young of Lowes, by the secretary of the association and it was decided he had assigned it to the wrong man. This subject was "When to Wean the Boy," and should have

been given to Dr. J. L. Dismukes, Dr. H. A. Shelby and Dr. J. F. Kirksey. These popular doctors are all married men and have no children and it was decided that they should discuss "The Proper Time to Wean the Boy," at the next meeting.

Dr. Grinstead, the well known and popular surgeon of Cairo, Ill., was given the subject "Surgery." He said the subject was so large and so great that it was only possible in a short time to discuss some particular phase of surgery, and he took for this subject "Bad Stomach." This discussion showed him to be an able, well informed and entertaining speaker on this subject, which was afterwards discussed by Dr. Stewart, Dr. Dismukes and others.

There were a few items named on the program which were omitted on account of the absence of the physicians, who had been assigned to them, but the members of the society notwithstanding, said this was one of the most entertaining and useful meetings they have had for a long time.

At the close of the program, resolutions of thanks to the local physicians of Farmington and the good people who assisted in making this occasion so pleasant to everybody, were unanimously passed and the meeting adjourned to meet at Mayfield sometime in August.

It was the pleasure of the editor of the Messenger upon special invitation by Dr. H. H. Hunt the popular secretary of the society, to accept the hospitality of Mr. Ed Lochridge to a seat in the "Rambler," with himself and his old time friend, Dr. J. H. Grinstead, of Cairo, Master Robert Lochridge with his steady and master hand at the wheel that gave us a swift and safe journey from Mayfield to Farmington and return. We were also accompanied by Master Ned Lochridge.

Dr. P. H. Stewart, of Paducah, was accompanied by his wife and son, Herbert, and all enjoyed their trip as well as the hospitality of the people of Farmington.

Dr. J. L. Dismukes, who is always full of fun and looks on the ludicrous side of life in many particulars during his response to the address of welcome delivered by Dr. Hendley, and at the close of his remarks, repeated the following poetry:

A burglar on the hunt for gold,
Broke in where two old maids did sleep.
"I hear a noise," said one old maid.
The burglar neath the bed did creep.
"It's a man, he's underneath our bed."
Said one old maid, and began to yell and shout.
"Shut up, you fool," the other said.
"Don't make a noise; you'll scare him out."
"He's as welcome as the flowers in May;
Lock the door so he can't get away;
We've been waiting for him day by day;
He's as welcome as the flowers in May."

There are four first-class physicians located at Farmington as follows: W. P. Alexander, L. G. Colley, W. B. Stokes and B. F. Hendley and it is

said there is not a case of sickness within five miles of that place, and yet these physicians have all made money and are doing well.

Dr. C. E. Purell of Paducah was accompanied by his wife and daughter and Miss Gentry and Miss Brandon of the Riverside hospital.

The new college building is now going up and will be completed by the time school opens in the fall. It will be a good building and at a cost of about \$4,000.

Farmington has always been noted for its good citizenship, morality and good schools.

Away back in the dim and distant past it was a "wild and wooly" place. It had saloons and many bad men congregated there, but those days are gone and Farmington is now a good moral place without saloons, without fights and without preachers.

It now has one big dry goods store conducted by the prince of merchants, R. C. Butterworth. There are also three groceries or mixed stores, one by Brown & Hargrove, one by Cloys & Hendley and another by J. M. Evans. There is one undertaking establishment there, but on account of malaria and other diseases being driven away by her physicians and by the increased sanitary condition of the country, this undertaker has very little to do. This only goes to demonstrate what a great change has taken place in this country in more ways than one in the past few years by the doctors.

Joe S. Bridges, who has lived there for sixty years, a short distance from where he was born, and a dear lover of big fine mules, is still one of the friendly characters to be seen in and around Farmington.

Dr. Ben Hendley who is about 65 years old and who is a descendant of the pioneer Hendley family, is still a healthy, energetic and useful practitioner.

M. J. Andrus, who is one of the wealthy and prominent citizens of that locality, said he bought three quarter sections of land in the early days at an average of about \$13 per acre and now it is worth at least \$100 per acre.

The piece of land upon which the "Stokes' Grove," the pond and the place where the meeting was held consisting of about 100 acres away back in other days was worth probably \$2,000. Now it could hardly be bought for \$10,000. There has been about the same increase in the prices of all other land in that section.

Take it all in all, the meeting, the dinner and the exercises of the day were a decided success and everybody returned home feeling better for having attended.

Dr. Stewart of Paducah, is a small man, but he was a close contestant with Dr. Grinstead, of Cairo, as two of the big eaters at the table. Dr. B. Stanfield and Dr. G. T. Fuller are both able men at the table. Rieke Morrow, John Dick and Leon Evans took the ribbon as the master eaters of the younger set.

W. E. Norman, Dr. John Dismukes, Dr. H. A. Shelby and Dr. Stevens are all master hands at the table. Dr. "Stanley" Mullens of Wingo, who it is said was named after our next governor, eats like an old stager and promises to even eclipse Dr. Shelton in the near future.

H. H. HUNT, Secretary.

Muhlenberg—The Muhlenberg County Medical Society met in Central City, on the 26th of May. The meeting was the first to occur for quite a while and even though the program was extemporaneous, consisting of reports of cases, it was certainly interesting and instructive.

H. D. Newman reported a case with discolored spots on wrists, sore mouth, diarrhea and muttering delirium. No history of prior similar symptoms. Male, age 50, diagnosis pellagra. Those present unanimously agreed that said diagnosis was correct.

Discussion revealed that the majority knew of no fixed or promising treatment for this disease. The variable treatments recalled were mistrusted on account of no verifying ensuing history proving that the patient would remain free from symptoms following such treatment. It seems convincing that the symptoms recur and vanish periodically whether treated or not treated and that they recur each time with more severity until death results, possibly not later than the fourth year. The majority also believed that the consumption of corn as a food has little if any influence as a predisposing cause.

T. G. Turner reported four successive labors of same patient. Labors all normal except that in all the umbilical cord was invariably prolapsed, protruding in front of the head several inches. In every instance the cord could be and was repeatedly put back but only to return again with every pain. The first three were allowed to proceed and in spite of every effort the cord must have been caught because all three resulted in still-births. In the fourth labor he found the cord again protruding. At this time he did a podalic version with the hope of saving the baby, and although it was accomplished without trouble, a still-birth again resulted.

A dependable procedure to meet this condition was asked for. **J. P. Walton** and **J. M. Ferguson** each reported that in one case each where they had found the cord prolapsed and in both cases the cord being accompanied by a hand, they had done podalic version and in both cases a still-birth resulted. **Clarence Woodburn** reported one case of prolapsed naval cord. He did podalic version and although very rapid, still-birth occurred.

J. G. Hendrick suggested that in this condition a loop be placed around cord and in this loop should be placed one end of a long slender instrument, then the loop should be pushed high up in the uterus. The loop, of course, carries the pulsating cord high up out of the way where it can

be easily held until the head engages, then the instrument may be safely withdrawn. This method was used by Dr. Hendrick in one case of prolapsed cord and a living baby was born.

Motion prevailed to meet in Central City again on the 23rd of next June and at this time the physicians of Central City will entertain the visiting doctors at dinner.

Dr. Claude Wilson was unanimously elected a member of the society at this meeting, he having applied for the transfer of his membership from Carter county.

The roster showed that the Muhlenberg County Medical Society now has the following members: T. J. Slaton, J. W. Koontz, L. P. Moore, C. B. Martin, T. J. Edge, C. R. Bennett, C. G. Crowder, J. C. Woodburn, J. R. Barnes, T. G. Turner, H. D. Newman, L. Bennett, J. H. Smith, R. B. Morris, J. P. Walton, Clarence Woodburn, J. M. Ferguson, F. K. Foley, Claude Wilson, S. T. Taylor.

There being no further business, motion to adjourn then prevailed.

S. T. TAYLOR, Secretary.

Russell—The Russell County Medical Society met at Russell Springs, May 29, 1915. The society was called to order promptly at 9:30 A. M. by the President, L. D. Hammond. Prayer by Rev. Wm. Vaughan of the Methodist Church, South.

After the reading of the minutes and other business, the roll was called and the following members answered present: J. M. Blair, L. D. Hammond, J. B. Scholl and J. D. Combest, non-member, and J. A. Bolin and A. W. Cain of Somerset.

First on the program was clinic hour. The largest clinic we have ever had by the efforts of J. M. Blair. He had enough clinical material to take up the entire forenoon session. All the sick examined and several operations which was of interest to all the doctors and the laity.

There was an unusually large attendance by the laity. They seem very much interested in the workings and doings of the society.

The afternoon session was taken up by addresses, reading papers, and discussions.

L. D. Hammond read a most excellent paper on "Ethics." All present endorsed it and said it was perfect. Talks on it followed by Drs. Blair, Cain, Bolin and Combest. I very heartily endorsed it but could not resist acknowledging that I had been guilty of most of the things that ethics said not do.

A. W. Cain, Councilor of the Seventh District, then read an exhaustive paper on "A Modern Doctor." The society listened attentively to the able essayist as he read his essay. It would sound like thunder tones to me, as he would hit himself and all present sledge hammer blows for our short-comings and misdoings both to our brother doctor and to the laity.

All the doctors present endorsed the paper from start to finish which was attested by the cheers and applause by the doctors and laity.

All the doctors report but very little sickness. When the hour of adjournment came, then came the sadness of the day when you would see the doctors shaking the parting hands and hands on each other's shoulders and almost embracing each other and saying goodbye "Doc", goodbye, come to see me, etc.

I wish the editor could have been with us to witness the proceedings of the day. Finally the parting moment came and you could see that there was a change in the countenance of the doctors from the bright-glad look to one of sadness when for the last time that day took the parting hands and sigh and say "Meet me up yonder in the New Jerusalem at the 'All-time Medical Society,' where there is no good-byes, nor no clinic, but old King Peter will be janitor and door keeper." So he will if we do our whole duty here, open the door and invite us into the last medical society where we will eat and drink and sing, "I am at home forever, Hallelujah."

The society adjourned to meet upon call of the President within thirty days or less.

J. B. SCHOLL, Secretary.

Woodford—The Woodford County Medical Society met in Versailles, Friday evening, May 14, at 7:30 o'clock.

President Stedman called the meeting to order. The minutes of the previous meeting were read and approved.

Wm. T. Collette, read a paper on "Tuberculosis," which was generally discussed by the members present.

Doctors Risque and Anderson cordially extended an invitation to meet in Midway, June 11th, at 7:30 P. M. The society accepted the invitation.

S. J. Anderson will read a paper next month.

New officers were elected at the last meeting. S. M. Steadman was chosen president; Wm. T. Collette, Secretary-Treasurer, and W. C. McConley was nominated delegate to the Louisville meeting of the State Medical Association, with J. W. Crenshaw as alternate.

WM. T. COLLETTE, Secretary.

Woodford—The Woodford County Medical Society met June 11th, 1915, at Midway with the following members present: Drs. Risque, Anderson, Sleet, Lehman, Blackburn and Collette.

Dr. Stedman not being present, the chair was occupied by Dr. Blackburn, Vice President. After the reading of the minutes of the previous meeting Dr. Anderson read a paper on the management of the various terminations of gestation, after which a general discussion was indulged in

by the members present. The place of the next meeting and the author of the paper to be read on that occasion will be designated later.

WM. T. COLLETTE, Secretary.

Sarcoma of the Tongue.—Two cases of sarcoma of the tongue are reported by W. T. Coughlin, St. Louis, (Journal A. M. A., Jan. 23, 1915), in a paper in which he reviews the heretofore published cases, fifty-eight in number and mostly recorded since 1885, hence it can hardly be considered a common disease. Sarcoma is generally supposed to be most frequent in young children, and may be prenatal in onset, but this, Coughlin finds, is not supported by the records, which show that it is most frequent after adult life has been reached. The preponderance of males 33 to 20, is notable. In seven cases, no mention of sex was made. Most of the patients were of the laboring class, but probably not out of proportion to their numbers in the general population. In only ten of the cases reported was mention made of previous injury, irritation from broken tooth, cigarette smoking, scalds, etc. The site was stated with fair accuracy in forty cases; in fifteen it was said to be at or near the tip. It seems to be more common on the right side, and toward the base and usually on the upper surface. In six of the cases it was pediculated. The size varies within wide limits. Ulceration of the surface is common and glandular involvements occur in the majority sooner or later. The majority of cases are round cell sarcomas, only nineteen of the fifty-eight being spindle celled. The symptoms begin with the feeling of a foreign body or sometimes hemorrhage. Pain is more often noticed than soreness, and difficult swallowing occurs when the tumor is situated near the base of the tongue. Accumulation of mucus has been an early sign. Dyspnea is a late symptom. The points of diagnosis between tuberculosis, syphilis, actinomycosis, etc., are stated. A diagnosis should not be made until one has excluded syphilis by the Wassermann and therapeutic tests. The treatment is operative; watchful waiting of a suspicious growth should not be relied on. If left to itself, sarcoma of the tongue is always fatal, but the time taken cannot be definitely estimated. Operation for recurrence may be a success, if for a primary recurrence. Recurrence has been noted up to 3 1-2 years after operation. In Coughlin's first case, the tumor contained round and spindle cells and in part of it, cartilage cells were found. The second case has been treated before and since operation with Coley's fluid, and the patient claims to feel perfectly well.

NEWS ITEMS AND COMMENTS

YEARLY PROGRAM OF CALLOWAY
COUNTY MEDICAL SOCIETY,
1915.

Meeting Every Second Wednesday at One
O'clock P. M.

January 13.—Dispensing vs. Prescribing,
Dr. P. A. Hart. Discussion by C. H. Jones.

February 10.—Cholera Infantum, Causa-
tion and Treatment, Dr. C. N. Crawford.
Discussion by Dr. Robert Mason.

March 10.—Cataract, Complete and Incom-
plete, Symptoms and Treatment, Dr. A. V.
McRee, Discussion by Dr. R. P. Crawford.

April 14.—Typhoid Fever, Pathology,
Diagnosis and Treatment, Dr. J. V. Stark.
Discussion by Dr. W. H. Graves.

May 12.—Hemorrhoids, Causation, Sympt-
oms and Treatment, Dr. W. H. Mason. Dis-
cussion by Dr. Richard Keys.

June 9.—Pott's Fracture Diagnosis and
Treatment, Dr. W. H. Grubbs. Discussion by
Dr. B. B. Keys.

July 14.—Gonorrhea, Acute and Chronic,
Dr. P. A. Hart. Discussion by Dr. Robert
Mason.

August 11.—Diphtheria. Pathology. Diag-
nosis and Treatment, Dr. C. O. Gingles. Dis-
cussion by Dr. C. N. Crawford.

September 8.—Trachoma, Pathology, Sympt-
oms and Treatment, Dr. W. G. Johnson.
Discussion by Dr. Ben Keys.

October 13.—Gall Stones, Diagnosis and
Treatment in Transit, Dr. E. B. Houston.
Discussion by Dr. C. E. Scholes.

November 10.—Gastric Ulcers, Diagnosis,
Surgical and Medical Treatment, Dr. W. M.
Mason. Discussion by Dr. E. B. Curd.

December 8.—High Blood Pressure, Causa-
tion, Diagnosis and Treatment, Dr. W. G.
Johnson. Discussion by Dr. J. A. Outland.

Following is the Program Committee: Drs.
P. A. Hart, W. G. Johnson, A. V. McRee.

A. V. McREE, Secretary.

DEAF CHILDREN.

Anyone interested in a little deaf child can obtain free literature explaining approved methods of training deaf children from infancy to school age by writing to The Volta Bureau for the Increase and Diffusion of Knowledge Relating to the Deaf, 1601 Thirty-fifth Street, N. W., Washington, D. C. This literature relates only to the training of little deaf children; not to medical treatment nor to the deafness that comes in later life. Age of child and other details are welcomed.

The Newer Experimental Medicine.—"It is one of the merits of the modern experimental medicine, which has departed from exclusive attendance at the bedside in order to enter the laboratories of the physiologist, physiologic chemist, pathologist, and pharmacologist, that it is rapidly learning to imitate human disease for purposes of study. A glance at the journals of scientific medicine of the present era," says the Journal of The American Medical Association. "discloses not merely the conventional recitals of clinical statistics, of case histories and necropsy reports, but also a newer type of contributions which are concerned with the effects of definite lesions induced according to a preconceived plan, or of pathologic states of organs or perverted metabolic processes initiated at will. Experimental injuries to the pancreas in animals have made possible the imitation of many features of human diabetes, operative interference with the organs within the cranial cavity has furnished a long-desired opportunity to study hitherto obscure diseases involving the pituitary gland and the cerebro-spinal system; surgical obstruction of the gastro-enteric tract has duplicated the conditions of intestinal stagnation and so-called alimentary toxemia so as to reproduce symptoms of unexplained origin; intoxications with various drugs have furnished illustrations of disturbed nutrition associated both with upsets of chemical processes in the body and with the consequences of induced degenerative changes in important organs. The catalogue of these and numerous other instances of the distinctly modern method of approaching the problems of the damaged organism becomes the more impressive as one contemplates how recent such helps to the interpretation of disease really are.

The Commoner Diseases, Their Causes and Effects by Dr. Leonard Jores, translated by Wm. H. Woglan, M. D., Published by J. B. Lippincott Co., Philadelphia, Price \$4.00. This is a book of four hundred pages. On the treatment of these commoner diseases, the questions of morphology and differential diagnosis have not been prominently brought out; but on the other hand, the relation of anatomical alteration to physiological derangement is given prominence; and such treatment demonstrates the significance of pathological changes as the real basis of disease. Some of the interesting chapters of this book are Anaemias, Leukaemia, Endocarditis, Aneurisms of the large arteries, Embolic Processes in the Lungs, Pneumonia, Diphtheria, Typhoid Fever, Appendicitis, Pulmonary Tuberculosis, Syphilis, Gastric Ulcer, Pancreatitis, and Bright's Disease. This is a valuable book with 250 beautiful illustrations.

IN MEMORIAM

DUDLEY S. REYNOLDS.

We have learned with deep regret of the death of Dr. Dudley Sharpe Reynolds, a brilliant member of the Alumni Association of the University of Louisville. It is therefore eminently fitting, proper and obligatory on us when a great co-worker in a large field devoted to human progress, advancement and bliss falls by the way, to offer these tributes of affection and admiration that are his due, and that we are proud to pay.

Dr. Reynolds was one of the original practitioners of medicine, the chief founder and active architect who specialized in diseases of the eye, ear, nose and throat, and the first to occupy the chair of Ophthalmology and Otology in the Hospital College of Medicine, which has been recently merged into the University of Louisville.

He was not only profoundly learned in his special domain of medical science, but also a thorough scholar in every department of medicine, in medicolegal jurisprudence, and in many fields of cultivated intellect. He began his professional life early and was unremitting in its toils; his untiring energy having ceased only with his death. As a writer he was voluminous and exhaustive. With a prodigious memory and one that was eminently selective, he laid under contribution the best books, be they pertaining to science or general literature.

Dr. Reynolds possessed a rare cluster of intellectual faculties, and social features. He was eminently homiletic as a companion, delighting in disputation he excelled as a polemic, and was one of the few men who could combine elegant language with force of expression; in exegesis of obtruse principles he ranked high, but the most brilliant gem in his diadem was that of a critic, clear and incisive, yea, when the object demanded it acrimonious, not towards the author but in defense of truth and the general interest of science. He stood up manfully for what he considered right, defending it with ardor, yet with a pathos in his voice which quickly fascinated his hearers. He was a regular attendant at the meetings of the American Medical Association and the Kentucky State Medical Society, and in eloquent, forcible, and logical language often enlivened their deliberations with expressions of masterly thought from his well-stored mind. In the delicate surgical operations pertaining to his specialty, Dr. Reynolds was a remarkably skillful, cool and dexterous operator.

Resolved, That while we recognize in their fullness the high professional attainments of our late colleague, we should do great injustice to our sense of what is due him, were we to fail to bear testimony to his assiduous attention and kindness of heart in his ministrations to the afflicted poor in our hospitals, and other charitable institutions;

Resolved, That we tender to his family the earnest sympathy of the Alumni Association in their irreparable loss;

Resolved: That a copy of these resolutions be transmitted to the family of the deceased, to the Kentucky Medical Journal, and the city press for publication.

WM. B. DOHERTY,

C. B. SPALDING,

Committee.

O. L. TOWNSEND.

Who died at Glensboro. Tuesday evening at seven-thirty o'clock of leukemia. Dr. Townsend was born in McLean county, Ky., fifty-five years ago and was a son of William H. and Nancy Townsend.

Dr. Townsend graduated at the Hospital of Medicine, Louisville, in 1881, after which he moved to Anderson county, settling at Glensboro, for the practice of his profession—medicine. In May, 1883, he was joined in wedlock's holy bonds to Miss Susan M. Brown, daughter of Mr. and Mrs. Daniel Brown. To their union one son—William H. Townsend, of Lexington, was born. Dr. Townsend was a member of the Christian church, a Mason and also a member of the Maccabees. In 1904 the Farmers Bank of Glensboro was organized and he was elected its first president, having served in that capacity ever since its organization. To no man is due more the success of that excellent banking institution than Dr. Townsend.

As a citizen, Christian and gentleman truly was he in every sense of the word. In the community in which he lived for nearly thirty-five years his splendid influence was always felt for the betterment of the people among whom he lived. He was a kindly-hearted and generous man and in his death Glensboro and Anderson county have lost one of its best type of citizenship. Besides the loving wife and devoted son, five sisters—Mesdames Mattie Eaton, of Kansas; Sue Shacklette, of Sacramento, Ky.; Emma Pound, Willie Walters and Elizabeth Gilland, of Jefferson county, are left to mourn their great loss.

After short services by Rev. E. B. Bourland, of this city, at 2 o'clock at his late home at Glensboro to-day, Thursday, all that is mortal of an exemplary, upright, honest, Christian gentleman will be laid to rest in the beautiful Lawrenceburg cemetery in the presence of a large concourse of loving and devoted friends. May the sod lie tenderly over his new made grave and the tears of sorrowing friends and relatives only go to moisten mother earth that contains the remains of a manly and warm-hearted man.

KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

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EDITORIAL.

THE CAMPBELL-KENTON NUMBER.

The matter for this issue of the JOURNAL is furnished by the Campbell-Kenton County Medical Society. Our members have learned to expect a great deal from this Society. We believe the profession of Campbell and Kenton counties have made more progress in scientific medicine—particularly preventive medicine, than any other similar medical organization in the whole country. We know the profession of Kentucky shares with the JOURNAL its pride in this Society and its membership, and that it will read carefully and thoughtfully the articles printed in this number.

All honor to the Campbell-Kenton County Medical Society.

IMPORTANCE OF THE JOURNAL TO THE MEMBERS.

Among the many agencies that have contributed to the uplift movement of the medical profession in the state of Kentucky, none has exercised a more potent influence or performed a greater service than the KENTUCKY MEDICAL JOURNAL. Through its columns and representatives the members of the profession have been stimulated to more active efforts resulting in the formation and perfection of the most compact medical organization in the United States. In the presence of such an organization more good has been accomplished in elevating the standard of medical education, the protection of public health, the promotion of happiness and the prolongation of human life of the people of this commonwealth than by all other agencies combined.

The JOURNAL from the time of its first publication has been the great unifying force of the medical profession of the state, whose common interests it has been its chief aim to serve. It has utilized every opportunity to

support the profession in its altruistic efforts to render the public a better service. It has at all times urged upon the members the importance of individual exertion in the highest degree and the establishing of a higher standard of medical education, the attainment of which should be the one great desire of each and every member, each to assist the other in his upward progress. It has likewise admonished the profession throughout the State to level every opposition and smooth the way for general progress, enlightenment, education and the higher ethical obligations. It has been active at all times in its efforts to elevate the ethical and educational average of its subscribers, thereby increasing the brotherhood of the profession and the percentage of efficiency to the public.

Through its columns the general practitioner has been taught that his most important obligation is the education of the public regarding the first symptoms of those death dealing diseases that destroy so many lives annually. It was active in the campaign waged a few years ago, for a reduction in the number of poorly supported medical colleges which resulted in a merger of the medical colleges of the entire state, thereby improving the outlook for medical education of the future.

Through its publications the members of the profession are kept in touch with anticipated or proposed legislation relating to public health and medicine. This affords them time and opportunity to use their influence in enlisting the support of their respective senators and representatives in securing enactments of such laws as are introduced for passage.

It has enlisted the cooperation and assistance of many of the best and most learned in the profession throughout the state who have given unselfishly their time, energy and thought in contributing scientific articles of high class which contained much information concerning the latest and most up to date

methods of treating disease; also many valuable suggestions, all of which are of inestimable value to the general practitioner.

It has always used its best offices for divorcing politics and medicine. Its work in the past has been a record of large and beneficent achievement. It is broadly representative and has always stood for the best ideals of medical science and art and is entitled to the united support both financially and morally of each and every member of the profession throughout the state.

W. E. SENOUR.

SURVIVAL VALUE.

That which lives after the action itself is complete is survival value. Actions have survival value according to the degree of good that grows out of them. For instance, the act of planting a tree has a survival value. The man who planted the tree has the joy of doing, the tree adds to the value of his real estate, but the tree will exist long after the man has turned to dust.

Advertisements which merely offer commodities at bargain prices have probably no survival value. They are transient in their effect and short lived; and therefore do not appear in this JOURNAL. Advertisements that increase the sum of good will possesses this survival value, and such is each and every advertisement found upon these pages.

It is generally conceded now that there are two good reasons for advertising; one is to sell goods and the other is to increase good will, both are necessary. The conscientious advertiser wants his customer to come back. Good will is a very tangible asset and the absence of it may be a liability. The KENTUCKY MEDICAL JOURNAL is owned and published by the medical profession of this state and every advertisement accepted by it is in the interest of scientific medicine.

The actions, schemes, plans and enterprises of "Get Rich Quick Wallingford" have no space in this JOURNAL. The advertisements appearing in our JOURNAL must have passed muster according to the rules laid down by the Council on Chemistry and Pharmacy of the American Medical Association, or else they would not have appeared here, and it behooves every member of our Society to give them preference. We are introducing to you through the advertising columns of our JOURNAL, men whom we vouch for and it should be with you a matter of reciprocity.

We are benefitted by the advertisements that appear in *our* JOURNAL and it is the policy and intention of the JOURNAL to see that our advertisers are benefitted by our readers, in that when you are in want of any article in your line of work, we ask you first to consult

the advertisements in the JOURNAL, these men stand by us and we should stand by them.

Your JOURNAL guarantees you courtesy, consideration, good will, right intent and everything that goes to make up a survival value, these things make for good fellowship, and the satisfied customer is ever and always a booster.

Your JOURNAL is busy dispensing good fellowship among its readers, and we ask our readers to do their part in the game of reciprocity. Again we ask you to deal with your friends.

Advertising has been defined as: "sale by description." To be sure no definition can be devised which will be at the same time broad enough to cover advertising in all its phases and specific enough to describe it, but this definition does cover advertising's chief function—sale—and advertising's chief characteristic; the fact that it does the work through some descriptive medium.

Advertising is unlike other forms of sale in many respects, but it differs from them most conspicuously in that it is ordinarily an attempt to arouse, modify, divert, direct or otherwise influence demand, rather than to satisfy it. And most advertising therefore, depends for its success on being able to make the consumer want what, in the long run, the consumer will be happy and satisfied in acquiring.

The advertisers of long life and large success are those who have rendered a real service to the consumer, and I say to you again that the JOURNAL advertisers render real service to those who patronize them, just give them a trial and be convinced.

G. J. HERMANN.

HISTORY OF THE CAMPBELL-KENTON COUNTY MEDICAL SOCIETY.

The members of the staff of Speers Memorial Hospital, after meeting together for years, discussing medical subjects and clinical material, discovered that they were being benefited, not only medically, but socially. By socially I mean, that for years the members of the profession in Campbell and Kenton counties had developed great skill in wielding the hatchet and it occurred to them that they themselves formerly used the hatchet on each other, and all at once realized that close association had eliminated this unnecessary evil.

They appointed a committee to formulate plans to organize a medical society embracing both Campbell and Kenton counties. This committee sent invitations to every physician in both counties to meet at Speer's Memorial Hospital and form a medical society.

On February 19, 1903 some forty physicians of both counties met at Speer's Memorial

Hospital and after listening to an address by Dr. J. N. McCormack, Secretary of the Kentucky State Board of Health, who kindly came from Bowling Green to meet with us and explain the advantages of the reorganization of the American Medical Association, formed the Campbell-Kenton County Medical Society. At this meeting the following officers were elected: President, Dr. C. B. Schooifield, Dayton; Vice President, Dr. B. F. Laird, Covington; Treasurer, Dr. S. B. Helman, Ladlow, and Secretary, Dr. F. A. Stine, Newport. Of the original officers Drs. Schooifield and Helman have died. Dr. Laird quit the society, and Dr. Stine is still filling the office of secretary.

We were in a few instances unfortunate in getting at first some members who were not desirable, as all large communities have a few such, but we were in hopes that they would improve and mend their way by association with reputable physicians, but after a long time we were compelled to rid the society of them.

Since the organization we have met regularly, alternating our meetings between Newport and Covington. We held our meetings on the third Thursday of each month. At first we met at Speer's Memorial Hospital in Dayton, and the Knights of Pythias Hall in Covington, and later changing the meeting place in Covington to the Y. M. C. A. Rooms. At the time we instituted the post graduate course, some six years ago, we changed our meeting place in Campbell County to the Carnegie Hall in Newport, it being more centrally located, where we held our post-graduate meetings every Friday afternoon, and the regular monthly meetings were held in Covington, the place of meeting changed to Cody's Cafe.

Finding the rent required from the Trustees of Carnegie Hall was making a drain on our treasury, the Court House Commissioners of Campbell County kindly offered the society the use of the Court House at Newport for its meetings, which was gladly accepted and where we now hold our meetings in Campbell County. From the very beginning we have always pushed forward the social feature, and whenever possible have had a lunch following the meetings.

At first it was very hard work to get our members to prepare and read papers and we were forced to call on our friends and neighbors from Cincinnati, Ohio, for many papers, but as time passed our members began to develop self-confidence and took the burden of writing and discussing papers upon themselves and I can say without fear of contradiction that they, at the present time are producing medical literature equal, if not superior, to any in the State. As for discussion

of papers and case reports all I have to say is: "that you better have your full armor on if you want to withstand the attacks."

What has the Campbell-Kenton County Medical Society accomplished for its members? As I stated at the outset of this history, that the physicians of both Campbell and Kenton counties were experts at wielding the hatchet, they never spoke as they passed by, except under their breath, they would steal cases from each other and it was almost an unheard of thing that one called the other in consultation. To-day the wielding of the hatchet is a lost art. You can see the physicians stopping each other on the streets and in public places asking advice of each other about some complex case. Their families exchange social calls. They warn each other of some unfavorable comment of a former patient, or some one of the laity on the management of some case, or when one is threatened with a malpractice suit they swarm around the unfortunate physician and defend him. To call a consultant from Cincinnati or afar is almost a thing of the past.

The physician, who when he first joined the society could not be coaxed to read or discuss a paper or report a case, to-day is always ready and anxious to do his duty whether it be in his local society, some other county society or State Association. Twelve years ago we had no one in our midst specializing; to-day we have specialists in surgery, eye, ear, nose, throat, heart, lungs, etc., consequently better and more competent physicians. Why has this change come about? The Medical Society has been the means to give each one the opportunity to touch elbows, see the good in the other fellow and the faults in himself and it has cemented them together in one great brotherhood.

Being the only county society consisting of two counties (Campbell and Kenton) some few years ago the State Association thought it best that this Siamese twin be separated and had many followers in the House of Delegates, but we raised so much objection to it that action was postponed for one year and in the meantime the Councilor of this district and other officials of the State Association made a trip to investigate the conditions existing and on the Councilor's recommendation and our vigorous protest we were allowed to live as twins.

For the past six years we have had a Committee on Program who arranges papers for a year assigning physicians to read on subjects named by themselves or chosen by the committee. This program is printed and mailed to each member.

Two years ago we dropped the post graduate course and are now holding two meetings a month on the first and third Thursdays, and

at each meeting have two papers. We have for the last three years instead of disbanding as we formerly did during the heated term, held meetings in the country, spending the whole day. These meetings have become so popular, that instead of two such meetings the first year they were increased to three the second, and this year we have four meetings arranged. It is surprising how the attendance at these meetings has increased; for instance, at the first meeting three years ago we had thirty-three present and at the last one held on June 17, 1915, there was eighty-five present.

We have always encouraged the attendance at our meetings of outsiders, be they the druggists, dentists or laity. On several occasions we have had the druggists meet with us and read papers, discuss our short comings and not forgetting to point out theirs. These were so edifying to both the physician and druggist that last year we made all druggists who desired associate members. We now have twenty druggists as associate members of our society.

Each year since our organization we have held an annual banquet and have found that getting the feet under the table is one of the best ways of keeping up good fellowship. During these years we have had for our guests of honor such distinguished physicians of Kentucky and surrounding states as Drs. L. S. McMurtry, Louisville; C. A. L. Reed, Cincinnati, O.; L. Frank, Louisville; I. A. Shirley, Winchester; J. E. Wells, Cynthiaua; C. H. Vaught, Richmond; A. T. McCormack, Bowling Green; C. Z. Aud, Cecilian; C. G. Daugherty, Paris; W. F. Boggess, Louisville; H. C. Clark, Falmouth, and J. G. Sherrill, Louisville.

Last year we had the honor of entertaining the State Association. How well we did it those who attended can best say. All the money raised for the entertainment was from the medical profession of Campbell and Kenton counties and druggists of Campbell county, and when everything was paid the committee having the entertainment in charge turned over a surplus to the society of \$400. We feel this is a record very seldom equaled.

What are some of the few things the society has accomplished for the community? Through the influence of the society Newport was the first city in Kentucky to establish medical inspection, which was soon followed by Covington. The establishing of a laboratory both in Covington and Newport in connection with the Board of Health, with the employment of a bacteriologist, where the physicians can have cultures developed or tests made for ail diseases, milk and water examined, etc.

Have always assisted and stood back of our city and county health officers in their work. Assisted in having their salaries raised and practically taken these offices out of politics, this is especially true of Campbell county and consequently have the best health officers in the State.

The society every year designates certain members to deliver public addresses on Tuberculosis, Social Evil, Preventative Diseases and kindred subjects. Have offered prizes for the best essay on "Tuberculosis" to the pupils of the public schools in the intermediate grade and high school of Newport and Covington. One of these was so exceptionally good that it was published in the JOURNAL. We had ordinances passed in both Newport and Covington compelling all groceries, daily markets and meat shops to be screened and other regulations of like character.

Starting with a membership entitling us to one representative in the House of Delegates we have grown until this year we will be entitled to five representatives. We are proud of the fact that every year since our organization we have reported an increase in membership. We have never failed to have a full attendance of our delegates at the State Association meetings, no matter where the meetings were held.

We are not unmindful of the honors that the State Association has conferred upon our society, such as Vice President, twice the oration in surgery, once the oration in medicine and the meeting of the State Association in 1914, for all of which we are very thankful.

F. A. STINE.

PHYSICIANS' MISTAKES.—OUR ATTITUDE TOWARD MENTAL HEALING CULTS.

The bane of the progressive spirit in science is the dogmatic habit of thought. The tendency of the mind and especially of the little mind is to dogmatize. We do not like to measure our finiteness against the infiniteness of truth. It is not a comfortable feeling to realize that much as we know there is vastly more to be learned. Hence we tend to regard our science as rounded out, completed, and ready for dogmatic statement. Nothing could more effectually bar progress than the feeling that we have already attained the end.

No sane physician would assert the completeness of our medical science. Yet we fall into a kindred error. We seem in decrying without examination all irregular methods of healing to claim a monopoly of medical truth. Our attitude is dogmatic enough to proclaim that what we do not know about the care of the sick and afflicted is entirely unknown.

Nothing is more noticeable in the trend of popular thought on medical matters than the tendency toward the various cults of mental healing. Faith Cure, Mind Cure and Christian Science have made enormous gains in popular favor. Our habitual attitude of unqualified condemnation of them is unscientific, unbecoming, ineffectual and offensively dogmatic.

Let us remember that ninety-nine per cent. of their followers were first our patients. They have slipped through our fingers unhealed and unsatisfied.

It is no adequate defense that we offer in saying there was nothing the matter with them, that their ailments were imaginary. A diseased imagination requires cure as well as a diseased lung. We can not be acquitted by the defense that we are not policemen to guide or coax or club the perverted mind into orderly conduct.

The fact is that we have not made enough of inculcating in our patients healthy habits of mind. We have not made enough of confidence, hope and expectation of good as healing agents. Many of our patients need character more than medicine and self control more than surgery. We must develop among ourselves men skilled in ministering to the need of mental correction.

The leaders of these movements are not all fakers and mountebanks. The bulk of them are sincere even though narrow and for the most part wrong. They give needed emphasis to the truth we neglect and thrive on our failures. Let medicine fully meet the people's health needs and all the cults, isms and quackeries of healing will die of neglect.

W. W. ANDERSON.

New Pupil Reaction.—A reaction of the pupil strongly suggestive of arteriosclerosis with increased blood pressure, is described by M. Wiener and H. L. Wolfner, of St. Louis (Journal A. M. A., July 17, 1915). About six years ago, they began to observe in a large series of patients a condition of the pupil larger than the normal average, with a usual minimum size of 4.5 mm. to 5.0 mm. in width, which contracted promptly to light stimulus, but immediately returned to the original size without change of the light. While they do not claim that this is pathognomonic of arteriosclerosis with high blood pressure, the association was so nearly constant that it strongly suggested its clinical value. Notes of a number of selected cases out of several hundred are given. Only a few patients had a low or normal blood pressure. This reaction must not be confused with the enlarged pupil described by Oppenheim, which contracts to daylight but does not respond to sudden flashlight illumination; or the rebound pupil described by Frye, associated with syphilis and neurasthenia.

OFFICIAL ANNOUNCEMENTS

PROGRAM OF GENERAL MEETING KENTUCKY STATE MEDICAL ASSOCIATION.

TUESDAY, SEPTEMBER 21.—9 A. M.

Call to Order by the President . . . JOHN J. MOREN, M. D.
Invocation . . .
Address of Welcome . . .
Response to Address of Welcome . . .
Address of Retiring President . . . JOHN J. MOREN, M. D.
Installation of the President.
President's Address . . . J. W. KINCAID, M. D.
Report of Committee on Arrangements . . . CHAS. W. HIBBITT, M. D.

SCIENTIFIC SESSION—10 TO 12 A. M.

Pneumonia in Children . . . JOSEPHUS MARTIN, Cynthiana
Catarrhal Pneumonia . . . J. L. DESMUKES, Mayfield
Lobar Pneumonia . . . B. W. WRIGHT, Bowling Green
A Plea for the More Thorough Examination of Patients
Presenting Symptoms Referable to Tuberculosis . . . O. O. MILLER, Louisville

SPECIAL ORDER AT 12 M.

Oration in Medicine—To-day and Yesterday in Medicine . . . O. P. NICKOLS, Pineville

TUESDAY AFTERNOON—SCIENTIFIC SESSION—2.00.

Facts in Ophthalmology Essential to the General Practitioner . . . T. W. MOORE, Huntington, W. Va.
Some Observations on the Ossifications of the Bones of the Hand (Lantern Illustrations) . . . J. W. PRYOR, Lexington
Common Sense in Dermatology . . . M. L. RAVITCH, Louisville
Focal Infections . . . N. T. YAGER, D. D. S., Louisville
Complications of Middle Ear Suppuration . . . L. S. GIVENS, Cynthiana
The Head Cold: Parts Involved, and Some of the Results . . . C. A. MOSS, Williamsburg
The Diseased Tonsils; What Shall We Do With Them? . . . C. E. PURCELL, Paducah
The Uses and Abuses of Narcotics and Stimulants . . . F. H. CLARK, Lexington
The Harrison Law . . . A. E. STEVENS, Mayfield

TUESDAY EVENING—8 P. M.

PUBLIC SESSION.

Annual Oration . . . W. L. RODMAN,
President American Medical Association, Philadelphia.

WEDNESDAY, SEPTEMBER 22—9 A. M.

Some Points in: Diseases of Children . . . E. B. McMORRIES, Clinton
Roentgen Ray in the Diagnosis of Bone Lesions . . . J. B. MASON, London
Anaesthesia . . . W. HAMILTON LONG, Louisville
Surgery of the Infected Hand . . . W. L. GAMBILL, Jenkins
Rabies . . . L. H. SOUTH, Bowling Green
The Present Status of the Surgical Treatment of Goitre . . . J. R. WATHEN, Louisville
Medical Aspect of Diagnosis and Treatment of Gastric and Duodenal Ulcer . . . J. T. McCLYMONDS, Lexington
Gastric and Duodenal Ulcer; Surgical . . . M. CASPER, Louisville

SPECIAL ORDER AT 12 M.

Oration in Surgery . . . J. G. GAITHER, Hopkinsville

WEDNESDAY AFTERNOON.

Digitalis: Its Indication and Manner of Use . . . W. W. ANDERSON, Newport
Medico-Legal Paper . . . HON. FRED PORCHT, Louisville
Difficult Presentation . . . J. T. REDDICK, Paducah
Demonstration in Obstetrics . . . EDWARD SPEIDEL, Louisville
Fractures (Lantern Slides) . . . J. B. MURPHY, Chicago
Radicalism or Conservatism in Surgery . . . A. H. BARKLEY, Lexington
Importance of Posture in Diagnosis, Operations and Treatment of Lesions in the Rectum and Sigmoid (Lantern Slides) . . . G. S. HANES, Louisville
Endometritis of the Unmarried . . . J. L. PHYTHIAN, Newport

THURSDAY, SEPTEMBER 23—9 A. M.

Therapeutic Measures Other Than Drugs . . . CURRAN POPE, Louisville
The Use of Iodine and the Iodides in Medicine . . . E. W. JACKSON, Paducah
Heart Complications in Infectious Diseases . . . A. L. THOMPSON, Madisonville
Cardio-Vascular Disease . . . W. J. BOGGESS, Louisville
Syphilis of the Heart . . . J. R. MORRISON, Louisville
Intensive Treatment of Syphilis . . . I. N. BLOOM, Louisville
Chronic Prostatitis . . . HERBERT BRONNER, Louisville
Verumentanum (with lantern slides) . . . GEO. H. DAY, Louisville

ORIGINAL ARTICLES

SEX: ITS RELATION TO WOMAN'S LIFE.*

By J. O. JENKINS, Newport.

Possibly no one will ever be able to analyze completely the psychic life of woman, nor rightly interpret the emotional activities which cement that life to sex instinct. All that has been or may be said is like so many scratches on a piece of crumpled paper, lines broken by divergent angles, leading to various different points not altogether apparent. Woman is so entirely different from man and governed so largely by instinct, emotion and impulse that it would seem proper to regard her as the result of a prior creation or origin than man, this chiefly on account of her reproductive function. We can readily conceive, that the primal cell was bisexual and possessed among its potentials the determination of sex; and, in its prolific multiplication, is seen the female instinct. The sex potential was most pronounced in the more highly nourished cells until in their advanced development, a specialized female cell became a fixed fact. Later, the special male cell became necessary as providing an element, liquid or effluvia as an accessory energizing agent.

It is not improbable, that the foundation of sex influence and love sense in mankind is but the expression of the chromosomes and determiners of the cell, and the absorption or exchange of sexual hormones required by the male or the female complement, and the consequent accentuation of the sex characteristic through a long period of evolution. In a study of the psychology of the sex function in woman, its necessity, force, indulgence and vagaries, we must acknowledge at once the many shadings of the question, which while almost inexplicable, are not abnormal. Neither our ideas nor ideals of morality should permit us to group all females into two classes, one of which we label "good" and the other "bad" because of some unusual difference in their sexual habits or life.

The study is rendered difficult by reason of social relations and the hesitancy of the individual to place the important data of her inner emotional life in the custody of another. Also, it has been deemed highly improper and indelicate for a woman to declare or to admit that the indulgence in sexual promptings or association produced in her sensations of delight or pleasure.

Until quite recent years a discussion of sex questions was discouraged by laymen, clerical and professional individuals as being an evil

and disgusting thing, which must be shunned. They closed their eyes to the numerous evidences of sex instinct and failed to recognize the powerful force which has shaped the activities concerned in man's evolution.

Brill "The New Dances." (*New York Med. Jour.*, April 25, 1914.) says of this: "Puritan prudery and Anglo-Saxon hypocrisy have for centuries acted the part of the ostrich and refused to acknowledge the existence of the sexual impulse. Ignorance was confounded with innocence and the most important functions of the human body were not only ignored but relentlessly debased."

Much of the hostility of the clergy, prudes and reformers to a discussion of sex and associated questions arises from repressed sexual feeling in themselves which must find an outlet. Their opposition is only the mechanism of self defense. As an illustration of this, we have but to notice the outcry against the proscribed play. As soon as the ban is placed upon it, the auditorium is crowded by two classes. One group views it to rail with horror?—sexual repression—and another group which finds it agreeable and unobjectionable because it satisfies their sexual sense and aesthetic emotional feelings.

Woman has suffered more from the repression of her sexual impulses than has man. She has been obliged to suppress sex motives and instinct as unwomanly and vulgar, though full sexual liberty has been permitted him.

The male dominates nature as the active sexual force and man is no exception to the law. By the exhibition of brawn and aggressiveness he fixes himself as the superior or positive element in sexual love, but his love is that of sensation, of pleasure only. The sex instincts of woman are of a more subtle and refined type and of greater strength and duration. They impel her to the use of art and artifices to bring the male complement within her power that reproduction may take place. To that end rather than to the mere pleasure sense, she bends all her attractions, accomplishments and being.

That she sometimes oversteps the bounds of propriety and surprises us with sexual eccentricities only indicates that a universal law has its exaggerations or exceptions according to the type of the individual.

Public opinion must be much more lenient with her escapades than with those of the man, because her sense of personal right and wrong is very different from his. From expressions on the subject by female social workers, married and single women from all grades and classes, there seems to be a fairly well defined opinion, that a revolution is slowly taking place in sex science, whereby the psychological life of woman will be brought to a more

*Read before the Campbell-Kenton County Medical Society.

rational and complete understanding than at present.

Sex offers the great irresistible force in the permanence of life. To the woman its importance is paramount, for in her are preserved instincts of sex attributes superior to man. Her chief function is reproduction, and the maternal instinct crops out as the infant in the cradle seizes her doll to shower it with caresses, and in the motherly care of older girls of younger children. It is the girl's sweetest dream to be a mother, and a psychic pleasure not less complete than that of the more mature woman beset by admirers.

With regard to the sex impulses of woman Dr. Catherine Yarros (*Miss. Val. Med. Ass'n.*, Oct. 23, 1913) says: "We know that the religious attitude toward it is wrong. We know there is nothing ignoble in it, but that, on the contrary, to the play of the sex feeling, we are indebted to much of the beauty in literature, art and social life."

Instinct, sex feeling and impulse produce the emotion, love and upon its expression depends the activities of the man and the further social status of the woman. In the earlier days she became the victim of man's powerful brutish propensities, which made her the prize of the chase: the prize of war, the choice article of the market and the slave of his passion. Through all her vicissitudes she retained her sexual instincts and prerogatives and gradually evolved herself from the position of a chattel to that of an independent entity. With this she developed a sexual appetite made expressive by the surgings of functional activity and governed by her state of consciousness and will.

The special centers of sex instinct, love, passion and pleasure are theoretically situated along the sides of the central fissure of the brain, while the more gross physical sensations are perceptions from the spinal cord. There are minor sex centers found at various points on the body in the distribution of sensory nerve filaments, and which respond with a minor sexual orgasm when irritated. Hereditary, congenital or pathological conditions of the cord or brain may so modify a normal sex feeling as to produce a hyper-sexual excitement and desire, or a hypo-sexual depression and frigidity.

Sex instinct prompts to sexual contact as fulfilling nature's law for each animate thing to reproduce. Her impulses urge the woman to mingle with the populace that she may come in contact with the male and enjoy his admiration and adulation, and to stimulate her own sex images.

To attain this aesthetic delight, she fortifies herself by personal adornment, costume, chicness of manner and flirtation. As a natural trait, she longs to be assured that she is ad-

mired physically. She admires her own body and studies feature and figure and how best she may accentuate her beauty and suppress her defects.

She ponders over material, color and design that she may increase her attractions and satisfy her aesthetic sense. She usually considers her person as a thing made for exciting man's sensations, and her drapery a setting to sharpen his admiration and ardor as well as to embellish her own sex dreams.

The consciousness of her power to lure the male comes to the normal woman sooner or later, though she may not permit herself the exhibition of that power in plainly spoken words. A sense of modesty may cause her to repress her desires and to control her impulses, but occasion may overpower her defense and permit aberrations of sexual indulgence, especially so, if she has been suddenly or recently deprived of accustomed sexual relations.

In her love, she lives in a much higher realm of elaborate ideals than man; ideals which are very complete and satisfactory to her, though possibly they may not be apparent to others. When she loves, it is with an intensity that brooks no interference. She feels her mate must be a part of herself and that no heaven can offer her a greater reward than to meet his embraces.

Her pleasure sense is very pronounced when produced by the favored one even in the absence of sexual contact, and is very acute if the latter be indulged in as a consequent of dalliance, though the climax is generally much more slowly reached.

Women who may be considered dull and unfit for many domestic and social duties, change to a state of brilliant mentality when sexually excited, and are often able to accomplish great results while the stimulation lasts.

Unsatisfied sexual desire is the Pandora's casket out of which escape all the eccentricities, obsessions and excesses of the neurasthenic woman; the nerve tension created by efforts at repression react and produce further nerve disturbance. In many the presence of this desire is not recognized, nor is its meaning understood by themselves, their friends or physician.

Unmarried women with no sexual experiences are frequently victims of the condition, and form a class with the disappointed married woman whose sexual life has been a failure. These persons present the greatest variety of vexatious problems to the psychoneurologist for adjustment, and furnish the sociologist with abundant material for practical work.

Unable to secure her sexual aims, the woman often becomes morbid, churlish or pessi-

mistic and an irritant to her companions, who are generally anxious to escape the sting of her vindictive tongue, or, if she has the will power to submerge the sex instinct, she may adopt some form of social or religious activity, which in a measure, may appease her psychic hunger.

If she has been reared among non-emotional environments, where every gentle emotion has been repressed, where sexual topics were never discussed and where there was little or no mingling of the sexes, she is very likely to be frigid in her sexual life and deficient in the finer pleasures of physical love. Such women when married, are content to plod through life, rendering sexual service to their mates from a sense of duty only. But when one of this type does happen to "wake up," she is apt to burst the bonds of social restraint and become a sexual firebrand to shock the community with repeated scandal.

Incompleteness of the sexual act as well as over indulgence is disastrous to the physical and mental status of the woman as much so as the unnatural stimulation of sexual responses by masturbation. The unrelieved vaso motor hyperaemia of the pelvic contents induces additional growth of neoplasms if they be present or may finally induce pathological changes in the normal tissues from increased pelvic blood pressure.

Too frequent repetition also may induce chronic changes in the ovaries, Fallopian tubes, endometrium and rectum due to repeated hyperaemias and give rise to leucorrhoea, metrorrhagia, hemorrhoids and other rectal diseases. The more or less lengthy continuance of the cause of these disorders, as well as the pathology entailed will finally produce a depressed vitality, and nerve weakness ending in pronounced neurasthenia.

Here begins a train of psycho-neurotic manifestations which may invade and include any part of the body and make the woman a physical and mental wreck. The virgin with unsatisfied sexual dreams, the one with disappointing sexual experience and she who is subject to over-indulgence may all develop mental obliquity from either of these conditions.

The sexual impulse is so urgent in its demands occasionally as to be overpowering. A woman thus flooded with a sexual storm is scarcely accountable if she lets down the barriers of restraint and prudence and seeks the one who can best satisfy the hunger tormenting her. When this desire is coupled with that of excessive yearning for excitement and change, she is in a good mood to adopt a line of life which includes successive lovers and hours of pornographie or sexual dalliance with them, much the same as the periodic dipsomaniac impulses of the alcoholic. Though

sedate and demure in the interval, she becomes an uncontrollable, passionate fury during the attack. The dangerous feature of these attacks is, that they tend to recur with increasing force and frequency until there is a perversion.

The change of lovers is due to an intense longing for newness and the pleasant attentions of the newcomer. The woman delights in the sharp sensations, the "tang," as it were, of a new and strange admirer aided by the novelty of submitting to one unfamiliar to her person. It is somewhat unfair to the normal woman to censure her too severely for a manifestation of polyandrous exhibitions when she becomes ravenous for relief of unsatisfied sexual love, for life has little in it for her whose love is not reciprocated. Her instincts impel her to seek a companion who fulfills her ideal of competency.

If we turn the pages of history we cannot but be impressed by the number of illustrious women who have been violators of the moral code; yet, very powerful forces in the world's progress and advance. Under the stimulation of love they were able to defy custom and allow the strong emotional woman full sway, to the marked progress in philosophy, literature, art and other channels benefitting mankind.

All women have the same talents in varying degree, but some are able to repress certain ones in deference to public opinion. There is an undercurrent thought that voices its protest in various ways, and whose effect may be seen in the tumultuous condition of the female world. Clubs, societies, civic and suffrage movements, the business life, the higher educational field, athletic strife and other activities which bring closer association with men, are daily producing a condition of aggressive female independence, which among other things will include female sexual freedom. If woman was designed for breeding purposes only, she should have credit for it, and her pleasures and enjoyment whether social or sexual amply guaranteed. The customary edict is, that she should spend her life or the best years of it, in bringing a numerous progeny into the world and to spend those years in caring for and rearing the brood when each addition involves more sacrifices and privations for herself and the others. With each addition she becomes more of a back number in the knowledge of the day and less capable of keeping in touch with any one of the great problems of the times. Her education, her polite accomplishments are at a standstill or worse, and her youthful ambitions with their roseate settings have been ruthlessly jarred out of existence.

When it is too late, when the fifties, gray hairs and wrinkles have come she finds herself

awkward and unwelcome among those abreast the times where her children crack the whip in jolly social pleasure.

Her sex feeling has passed usually because of the many rude jolts it received along the matrimonial road, and the evening of reverie brings few happy reminiscences of occasions when she receives psychical and physical satisfaction from her bounden mate. Sometimes the thought is bitter, that she was not even considered as being the possessor of sensory centers.

When the stock animal exhibits sexual pressure it is quickly recognized by its master and its needs promptly supplied. A woman, however, under the same stress is likely to be met with a shrug of the shoulder, a prayer book and an ice bag.

Woman knows she has not been treated justly by the civil, social and moral laws of the land, and that her happiness and value to the Nation have been unwisely much curtailed. Religion, custom and man's legislation have been responsible for restrictive sexual suppression, but women of all classes feel the liberating change coming when they will have the right to select the father of their child-to-be and demand of him or of the State a proper protection and support.

It is the law of Nature, that the female by tongue or act solicits the attention of the male, woman by implication, is no exception to the rule. The right should yet be hers, and the artificial conditions imposed by civilization and social law greatly modified or annulled.

In this light it is not impossible to presume, the day will come, and not too remotely either, when a more liberal construction will be accorded the marriage ceremony, and a greater latitude allowed the woman in her sexual habits. A woman may then seek a mate openly and without rebuke, when for *specific* reasons, her allotted partner has proved himself unworthy of her. She will then have the legal right to enter into limited contracts with a man of her choosing, who will be competent to supply her needs.

The ethnology of developing races, shows, that the barbarian woman possessed these rights apart from the sentiment of love, and that the prerogative was lost when man began to assume to himself the arts and crafts originated by her in her household duties, a fact found true in the history of most of the new civilized nations of the earth.

A restoration of the right will enhance the advent of the eugenic marriage, and the eugenic child will be one result of the advance; the extinction of commercialized love and vice diseases and others.

Should such a change be made in our social customs, we believe they would be in response to natural law, and not because she should be-

come a disciple of free love; she but follows a strong inherited instinct of sexual selection.

Married women often find their husbands indifferent, selfish or uncouth in their approaches; they envy the free woman the polite attention she receives from her admirers and, not infrequently, are tempted to lay aside the conventionalities of society and contract a *laison* with some chosen man.

A woman carelessly and continually shorn of a reasonable amount of pleasure, finally becomes frigid, dissatisfied or disgusted and is less competent than ever to respond to her lord. Discord, infidelity and separation, with the specter of divorce dimming the horizon of her married life, are direct results of the husband's indifference to detail. Much of the sterility of married life may be explained in the neglect of endearing caresses, for which the woman's sensitive nature yearns, and which is so essential to her sexual happiness.

Stripped of all sentimentality, there is a vast chasm between the woman who loves for love only, and the one who peddles it for money or gifts though the latter is sometimes the final progression of the former. The latter is usually an example of direct hereditary taint or unfortunate circumstances, while the former is an acquired condition whose exacerbations are more or less controllable. Nevertheless, it requires an exceedingly strong will power, exercised among supporting environments, to overcome the sexual impulse and to produce a revolution in those periodically addicted to promiscuity.

There remains a class of women, who under the guise of love exploit their persons for money, or that they may be participants in a continuous carnival of emotional and sexual excitement. They are either mercenary or slaves to perverted sex instinct and are scarcely to be considered normal. Their capacity for sexual association is unlimited though it is doubtful if they experience normal pleasure with any except one particular lover. With all their sexual excesses, they remain in good sexual health unless attacked with infection or become addicted to alcoholics or drugs.

It is possible that woman has been blamed too severely for the free use of the function, amounting to misuse in the case of the prostitute, and have become violators of social codes. But the student must pause before accepting social dogmas and determine the truth.

That some women seem to misuse their endowment does not weaken the argument. It merely shows the artificiality of life, the biased side of the would-be reformer, and the blindness of the pulpit on a question which has existed through all time.

Dr. H. B. Favil in a discussion of Dr. Yar-

ro's paper above referred to remarks: "The question of sex instinct is so closely related to the question of social life and hygiene that until we have studied it in its fundamental condition, we cannot be considered as efficient in the relationship of sex to society

Virtue is relative only in degree according to the standards adopted by individuals or communities. In times past the prostitute, now considered an undesirable and frail social outcast, was an honorable person whom matrons admitted to their homes and gatherings.

The mistress or morganatic wife of the noble is acceptable to-day in high social circles and is entertained with honor. Her sister, however, lower down in the social scale, and who has adopted the life of a prostitute, courtesan or mistress from necessity, force of circumstances or true love, is denied recognition other than by her own kind. A piece of money is the dividing line between acceptable respectability and those bowing to the promptings of exuberant love.

We are not urged by a desire to defend the woman "who stands for hire," though there might be plausible reasons for so doing, but to show quite imperfectly, that woman exploits her sexuality from the inborn proddings of instinct or self preservation. And also, that man has departed from the true line of his development and duty, and has debased the beautiful treasure placed in his care until it has lost its value through his selfish neglect and oppression.

As the subject develops it deepens and broadens like the wild stream rushing from its mountain source to the sea, each tributary adding its important force to the voluminous tide hastening on. There is much to say for the woman who loves, whether she loves by consent of law or whether by the higher law of Nature.

From this brief and incomplete study of the subject, we offer the following conclusions:

CONCLUSIONS.

1. That the physical tranquility of woman depends largely upon her sexual life.
2. That the mental and physical equipoise of woman is governed by the degree of sexual enjoyment she receives from her mate.
3. That unsatisfactory sexual enjoyment and life, invites or is often responsible for mental, functional and structural disease in women.
4. That woman's state of happiness in life depends upon the harmony, etiquette and completeness of the sexual act.
5. That the normal sex instinct may be submerged and never develop by reason of the woman's rearing, or its absence may be the result of some overpowering ambition or shock to her aspirations.

INDICATIONS FOR USE OF OBSTETRIC FORCEPS.

By JOHN J. MOLLOY, Covington.

The use of the obstetric forceps is to expedite a delivery which for some reason is being delayed to the disadvantage of either the mother or child. When the necessity for terminating the labor is in the interest of the mother, the cause falls under one of two classes (a) mechanical or (b) non-mechanical.

Among the mechanical causes may be mentioned uterine exhaustion, contracted pelvis, excessive rigidity of soft parts, large child, oedema of any part of parturient canal, growths as fibroids, exostoses, et cetera.

Non-mechanical reasons for hastening matters in the interest of the mother are the occurrence of eclampsia, acute pulmonary oedema from a bad heart, some inter-current diseases or complication as pneumonia, placenta praevia partialis, excessive nervousness or fright.

Somewhat arbitrary rules have been laid down by some authorities to the effect that normal presentations in mid-pelvis that have not made progress for two hours should be delivered and that likewise a head that in spite of good pains has remained stationary on the perineum for one hour should be delivered by forceps.

The foetal indications for haste are exhaustion of the infant as indicated by an excessively slow or excessively rapid heart action falling below 100 or going above 160 per minute, prolapse of cord and meconium in amniotic fluid in vertex presentations.

These are some of the main conditions that determine the use of forceps, yet in actual practice many other situations may and do occur in which the forceps may be advantageously used. The interpretation of the conditions present is so much a matter of individual judgment that in the hands of excellent practitioners different procedures are followed in what appear to be identical cases. It is difficult to lay down hard and fast rules to govern all cases and it is in the skillful diagnosis of the conditions present and the nice adaptation of the means at our disposal to overcome the difficulties that the skill of the artist appears.

Take for example the question of pelvimetry, how many of us can determine by any of the means laid down in the text books even with a pelvimeter the exact pelvic measurements?

Before the obstetric forceps may be applied with safety certain conditions must be present with reference to both mother and

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child. The child must present by the vertex, the os uteri must be dilated or dilatable. The membranes must be ruptured, the child's head must not be too large and the pelvis must not be excessively contracted in any of its diameters. The forceps may be properly applied to any vertex or face presentation in any position except possibly in a face with chin directly to posterior—after good dilatation and engagement in the upper strait has taken place—forceps of course are not applicable to shoulder, transverse, or breech cases, though they may occasionally be of service in the case of an after coming head. It is of course, elementary obstetrics that the higher the head in the pelvis the more difficult and dangerous becomes the instrumental delivery, and it is in just these cases of dystocia with tardy engagement, slow moulding and descent that the patient becomes exhausted, and is apt to need artificial assistance. It has often been a very hard thing for me to decide just when my patient is at the extremity of her endurance. I believe it is safer practice, when moulding and descent are progressing even though slowly to delay the application of forceps as long as possible if the condition of the mother be good and no special reason exists for haste, with the judicious administration of a little chloroform, just enough to soften the sharpness of the pain and eliminate the element of fear, we can usually defer the instruments till the head is well down in the pelvic canal or on the floor of the pelvis. The greater safety to both mother and child I think is well worth the patience. It is often a hard matter to resist the importunities of the patient or friends to "do something." Our sympathies are liable to cloud our judgment and impel us to interfere too early. I believe the unwise and premature use of instruments is productive of much pelvic pathology and often plays sad havoc with the physical and mental condition of the child. I believe the sins of commission in this direction are much greater than the sins of omission. The shocking violence sometimes used to drag an imperfectly molded head through an incompletely dilated maternal canal with the sad consequences to the maternal soft parts and often to the child as well, is quite inexcusable. It is one of the commonest causes of maternal invalidism. Some one has said that an important indication for the use of forceps is a theater party. More's the pity if true. If the attendant can not patiently wait till conditions are such that the use of the forceps is a humane procedure and will do less harm to mother and child than a natural termination of the labor will do—then far better that he go to the theater and let nature do the work in her own way as best she can. Better be "too late" and trust to the neighboring woman to keep the baby

from smothering. He can at least come in and triumphantly deliver the placenta without doing any great harm—far better this than an ill-advised and premature instrumental delivery with all its resultant maternal and infantile morbidity. With, I think, a full appreciation of the value of the forceps properly and timely used, the one point I want to emphasize in this paper is to "make haste slowly" in their use. Be sure there is a clear indication present, be sure that the natural progress is not satisfactory and that the powers of the mother are failing, be sure that there is sufficient dilatation or at least dilatability. I can recall very few cases in my own work where a quiet review of all the circumstances after the battle convinced me that earlier use of the forceps would have been better, but I can recall a great many cases in which a little more patience would have been better. In the average cases then as we meet them in this locality, sturdy enough women as a rule almost entirely free from deformities of the pelvis (in 27 years I have not seen a half dozen badly contracted pelves) we are not compelled to consider a high forceps application even in those who must be helped. I am very much afraid of high forceps application. If the disproportion between the foetal head and the maternal canal is so marked as to prevent proper engagement at the upper strait, I believe a Cesarean section in competent hands offers a better solution of the difficulty, when engagement has occurred.

I think it must be very infrequent that patience and as careful conserving of the strength of the patient as possible will not bring about a degree of progress that makes forceps delivery a safe procedure. I think it very important in estimating the strength of the patient and her ability to continue the labor, to rely chiefly upon the objective signs as made out by the pulse, temperature, absence of tenderness and dryness of parturient canal, etc. If the protestations of the average patient are listened to the obstetrician is sure to be led into mistakes. However when satisfactory dilatation has occurred and engagement has been secured and descent for one cause or another becomes arrested perhaps somewhere in mid-pelvis, if after one, two or three hours no progress occurs, then, I think, forceps should be applied, the length of time one should wait in such a case, I think, depends upon the character of the pains which have proceeded, if it be a delay from uterine inertia a little rest induced by chloral or morphine will often give the patient renewed strength, if it be a case of uterine exhaustion from very severe pains then I think it best not to wait very long. The use of the forceps for the correction of posterior positions is often resorted to and enables us

to rotate the occiput to the front at the same time that traction is exerted. I think if these occiput posterior positions are recognized early their anterior rotation can practically always be secured either by some of the digital manipulations, or else if spontaneous rotation does not occur as it does in the great majority of cases, by applying forceps and using traction combined with rotation removing them when the head swings around to second or first position as the case may be. In my hands quinine sulphate in 10 or 15 grain doses has seemed to have very satisfactory oxytocic effect in about two hours after its administration, not so, however, in all cases. I have sometimes given the drug while I prepared for a forceps delivery and found strong pains to follow, doing away with the necessity of a forceps delivery. Pituitrin, the extract of posterior lobe of hypophysis cerebri, is no doubt the most powerful stimulant to uterine contraction that the pharmacologist has given us and the question whether pituitrin shall be used or the forceps applied comes up very often. I have not felt that I needed pituitrin very often, that under conditions ideal for its use satisfactory results are obtained, I have no doubt; but the action is sometimes so violent that I have not felt it a safe procedure except in a very few cases. Where there is no obvious disproportion between the size of child's head and the pelvic diameters, presentation normal, and position good, dilatation completed, I have occasionally given half to a whole c.c. of pituitrin with good results. I think where for any good reason it is inadvisable to use forceps as e.g., lack of an anaesthetist or proper help, unfavorable environment for my instrumental procedure, etc., pituitrin may be given preference to forceps, provided the above mentioned maternal and foetal conditions pertain. I think the obstetrician should always have a general anaesthetic (ether or chloroform) at hand; however, his instruments ready to use in case the uterine contractions become too violent.

I feel sure the routine use of pituitrin, as a time saver results in unnecessary violence to the maternal soft parts inviting infection and a lot of gynecological ills for your future torment. The perfect control the operator has over the progress of labor when forceps are used seems to me to more than compensate for the extra trouble involved in their use and the patience necessary to bide the time when this application is practicable. Whether the morphine scopolamine analgesia, otherwise known as "Twilight sleep" influences the indications for forceps I don't know. I have not used the method in the Frieberg sense and don't intend to until it becomes obstetrically safe. In cases of moderate pelvic contraction, as sometimes seen in syphilis, rickets,

with a conjugate vera of 3 1-2 inches or a little less, forceps as a rule become necessary as the molding and descent is retarded and exhaustion is apt to come on necessitating relief.

In cases of markedly contracted pelvis I should consider a Cesarean section as offering better chances for both mother and child; indeed, in the hands of competent men the mortality rate after Cesarean section is remarkably low, so low that it is now a recognized procedure in many cases of dystocia that were formerly delivered by forceps. When Baldwin, of Columbus, has done twelve cases in succession with 100 per cent recoveries of mothers and thirteen babies all living, it is hard to see why a risky forceps operation should ever be done when a competent man is at hand to do a Cesarean section; surely such a record refutes the idea that a mutilating operation is ever necessary or justifiable on a living child, even if it were morally permissible, which I think it is not.

To recapitulate (1) Make an accurate diagnosis of presentation, position, condition of maternal parts as to rigidity, moisture, dilatability, etc., and you will then have a mental picture of how the labor should and probably will proceed and you will be in a position to intelligently judge progress. Then let the case alone. (2) First stage may last an hour or two or a day or two; time should not determine interference. If molding and descent are proceeding, even though slowly, let the case alone provided, of course, the mother and child are in good condition; when engagement has occurred and dilatation is complete, or nearly so, then forceps may be applied if there is any good reason for hastening the labor but above all never let any consideration except the welfare of the mother and child determine the use of the forceps.

Foreign Body in the Lung.—G. L. Richards, Fall River, Mass., (Journal A. M. A., July 17, 1915), reports the case of a young man who had since 1910, occasional chills followed by fever, though apparently otherwise healthy except for occasional attacks of pain. He had a very slight cough and some trouble in the right lung was suspected. Nothing abnormal had been discovered by the fluoroscopic examination. The blood count showed a steady leukocytosis above normal but no definite physical signs of lung disease. A thorough roentgenoscopy showed a tack in the right bronchus which the patient could not remember ever having inspired, and it is probable that it had been there for many years. It was largely eroded and covered with oxidation products. It was removed by bronchoscopy and the patient was relieved of further trouble.

THE GULLIBLE DOCTOR.*

By T. J. WIDRIG, Pharmacist, Newport.

Now if the doctor is really a soft mark, to tell him about it might be a serious proposition. Along this line of thought Oliver Wendell Holmes says:

"Don't flatter yourselves that friendship authorizes you to say disagreeable things to your intimates, on the contrary the nearer you come into relation with a person the more necessary do tact and courtesy become. Except in cases of necessity, which are rare, leave your friend to learn unpleasant truths from his enemies, they are ready enough to tell them. Good breeding never forgets that self-love is universal."

Believing and feeling the full truth of the words of Holmes I make bold to transgress, and bring a few of your commercial and medical faults to light.

There are three types of creatures that have and are still exploiting you men of medicine.

The first or commonest type, furnishes you with ready made prescriptions, you don't have to think, they give you a name that stands for a part phony formula and when you, favored ones write the magic term the druggist sends you, a something that represents a whole lot of drugs, its so easy; you don't have to think.

The next type are not near so crude, they're a game all their own, they hypnotize you with a copyrighted name that's backed up with a very complex chemical formula, you don't understand it, but the legend emphasizes that its a succedaneum for an old and trusted friend.

The third type is so crude, that I marvel that sane men go against the game. Specific Medicines. Just read the labels, and ask yourselves if it is enough to be a doctor.

Concerning the first bunch, how many of you have read in the San Francisco number of the *Journal* the expose of your old friend Burman's Soluble Iodine.

"Heavy" on the soluble, because that word costs you or friend druggist one dollar the ounce, twelve dollars the dozen ounces, the commercial value of which is for the dozen thirty five cents, the clinical value, the equivalent to six ounces of tr. iodine U. S. P.

The literature of this firm emphasizes that their product is better born by the stomach than the U. S. P. tincture, that its miscibility with water is little short of marvelous, there is hardly a single claim made for this nostrum, that is either truthful or that can be substantiated.

Their chiefest claim, that there is less gas-

tric disturbance from the ingestion of their soluble iodine than with the introduction of like amount of U. S. P. tincture has an element of truth about it, it possessing but half the iodine content it is obvious that the disturbance must in that proportion be lessened.

Regarding the claim for miscibility, try it for yourselves, you will find the U. S. P. tincture capable of performing any gyrations claimed for this chemical wonder, and last but not the least any pharmacist will gladly furnish the equivalent of a dollar bottle of this material for ten cents and he will double his money by the sale.

Another favorite of you medicine men is the Syrup Cocillana Compound, the copyrighted name of a cough remedy belonging to a well known corporation.

Now let's forget for the moment that this is a morphine compound, any of you folks can

SYRUP COCILLANA COMPOUND

EACH FLUID OUNCE CONTAINS:

ALCOHOL	5 PER CENT.
DIACETYL MORPHINE HYDROCHLO- RIDE	6.24 GRAIN
TINCTURE COCILLANA	40 MINIMS
TINCTURE EUPHORBIA PILULIFERA	120 MINIMS
SYRUP WILD LETTUCE	120 MINIMS
SYRUP SQUILL COMPOUND	24 MINIMS
CASCARIN (P. D. & CO.)	8 GRAINS
MENTHOL	8-100 GRAIN

figure the morphine content for your prescriptions, but it bothers you to remember the dosage of the other drugs of this wonderful compound

Tr. cocillana, tr. euphorbia, syr. wild lettuce, who are they, what are they, can anyone present tell anything about them or vouch for them; they are not standard, they are not official in any pharmacopoea. From the way you folks have been writing for this stuff, the supposition is that its sufficient to know that

NOTE ON COCILLANA.

Cocillana is the bark of *Guarea Rusbyi*, a Bolivian tree. It is expectorant, tonic and laxative. Its action upon the respiratory mucous membrane is similar to that of *ipeacacuanha*. It is believed to contain a strongly active principle resembling emetine in its physiologic effects, which is excreted by the mucous membrane, especially of the respiratory tract.

Cocillana causes an increase in the secretion of mucus, a slight moisture of the skin and, in large doses, nausea and vomiting. The natives of Bolivia use it as an emetic and cathartic.

The United States Dispensatory says of Cocillana: "In doses of twenty to fifty grains (1.3-3.2 Gm.) the bark causes vomiting, with prostration and some purging; also, it is said, much sneezing, dull frontal headache, and discharge from the nasal mucous membrane. The therapeutic action of the drug resembles that of *ipeacac*, although as an expectorant it is somewhat more stimulant. (See *N. Y. M. J.*, December, 1889, and April, 1890). It has been used in acute and subacute bronchitis, bronchial pneumonia, phthisis, etc., with asserted success. Dose of the fluid extract, from eight to twenty minims (0.5-1.3 Cc.) every three or four hours."

the manufacturers are wise to their valencies even though their clinical value were held

*Read before the Campbell-Kenton County Medical Society.

as negligible by the pharmacopoeial revisionary committee.

Barring then our friend Squill Compound, you directors of the destinies of our sick have been sending 67 cents of local wealth for four grains of diact. morphin, because its put up in an "elegant" vehicle, or just because you don't have to think.

Another of your favorites was called to my attention on account of the implied accusation that we druggists had not given him a square deal.

Mr. Martin H. Smith of Glyco-Heroin fame is nearly as astute with his diarrhoea of words as some of our Specific Medicine friends: Here's the sort of literature you "fall" for:

"Glyco-Heroin (Smith) is superior to preparations containing opium, morphine, codein, and other narcotics and does not produce the

tent for the patient's prescription.

I made bold to ask one husky why didn't he go out on dark nights with a piece of lead pipe, that would be lots easier than even writing glyco-heroin.

Your Council on Pharmacy also refused the Smith outfit recognition on their Ergo Apiol because there was no Apiol found in their capsule.

Now the question which arises in my mind is, what's the charge, could you make a case of Grand Larceny or obtaining money under false pretenses? Make it what you will they are not phased by your Council's findings, they blandly inform you that every capsule of their make, "That's Genuine" is stamped on the inside H. M. S., but you won't find this advertisement carried by the JOURNAL.

The American type of drug exploiter such as Fongera, Smith, C. Bischof & Co., with their Validol and Hydrogogin, etc., fakes, are pikers of the poorest sort compared with the work of the Farben Fabriken Outfit.

The assurance with which they play upon your gullibility, makes you doctors the laughing stock of the drug world.

On page 25 of their pamphlet you will note iodothyrene, chief active principle of the thyroid gland. Now that's all there is to it, they have given you the name, that's sufficient, for you even though no other chemist or physiologist knows a thing about the "chief active principle" of that gland.

You are to be enlightened further, each gram contains 0.003 of iodine. Dose 1 gram a day. Cost \$3.40 the ounce. You are further informed that this product is mixed with a little sugar of milk.

U. S. P. desiccated thyroid cost one dollar the ounce, average dose two grains no sugar milk added, but don't forget this—U. S. P. Sugar of milk is worth 30 cents the pound.

Of course your time is too valuable to pay any attention to such a trifling matter of compelling your patient paying thirty prices to a foreign corporation, but I'd like to hear your howl of anguish if Mr. Barkeem charked you 20 cents for the 15 cent highball.

There's one point that nearly escaped me. Our friend tells us that each gram contains 0.003 of iodine; that means that the ounce content would approximate 1.1-2 grains costing your community \$3.40.

Should you desire to be real fancy or in your mind's eye rise to the heights of "Specialist" write Isopral when Chloral is indicated.

Naively are you informed under the caption of indications: "All the indications of chloral, dosage 5 to 15 grains." Now as you must show that you are an up to the minute internist and equal to any specialist you must prescribe Isopral \$1.40 the ounce. Chloral \$1.35 the pound is too plebian. There are

GLYCO-HEROIN

(SMITH)

REG. U. S. PAT. OFFICE

HEROIN CONTENT $\frac{1}{2}$ GRAIN TO
FLUID OUNCE
ALCOHOL 3 PER CENT.

A product embracing besides heroin, the most active balsamic, expectorant and antispasmodic agents. Possesses analgesic, antispasmodic, balsamic, expectorant, dyspnea-dispelling, inflammation subduing and muculicelying properties in a remarkably high degree.

Glyco-Heroin (Smith) is superior to preparations containing opium, morphine, codeine and other narcotics, and does not produce the untoward effects characteristic of those drugs.

DOSE—The adult dose is one teaspoonful every two hours, or at longer intervals, as the individual case requires.
For children of ten years or more, the dose is from one-quarter to one-half teaspoonful; for children of three years or more, five to ten drops.
This product is designed expressly for the use of physicians.

MARTIN H. SMITH CO.

Pharmaceutical Chemists, New York, U. S. A.

Guaranteed by Martin H. Smith Co., under Food and Drugs Act.
June 30, 1906. Serial No. 278.

untoward effects characteristic of those drugs."

Is Martin H. Smith a fool turned loose in the realm of drugdom, that he has the effrontery to attempt to handle your intelligence as he would a manikin, or to digress, is he like the owners of heroin, who sought to evade or questioned the validity of the Harrison Act, because their copyrighted product was Heroin, and further they wanted no acquaintance with diact. morphin.

Verily some men will sell their souls.

Mr. Smith uses eight grains of heroin to the pint of his famous compound, because of this we pay him \$1.60 or \$19.00 the dozen pints. The approximate cost of eight grains of heroin is 20 cents.

I called the attention of several medicos to this little detail of cost and was rewarded with the response that it's so much easier to write glyco-heroin than to figure heroin con-

many more like the foregoing, but why look further we know the type, that ought to be sufficient.

They come here to bull con us, they got our money, they didn't even have to anesthetise us to get it, the question now is are we going to keep on buying more gold bricks.

The last type of Pharmaceutical mountebank I want to call your attention to is the Specific Medicine trible.

I believe we are thoroughly acquainted with the Farbenfabrik kind also the fellow that will prescribe for you, the fellow that's so kind to you, so good, you don't have to think, they are the kind that take your bank roll, they make you feel that you have had a real nice time and you never would think of calling the police. No you would rather telephone to mother for enough clothes to hide your nakedness, and slave your conscience with the thought that you still possess your virtue and your diploma.

Regarding the Specific Man here follows the verbatim copies of several labels:

"Specific Use—Fragrant Sumach.—In renal and urinary affections, painful catarrhal maladies. Diarrhoea with profuse and painful discharges and in some hemorrhages."

"Chionanthus.—Chionanthus is also indicated by a dirty sallow skin, with expressionless eyes and hepatic tenderness, the passage of light grayish stools and scant urine, which stains the clothing yellow.

"The liver pain of Chionanthus may range from a slight uneasiness with a feeling of weight and fullness to an intense pain converging from the gall bladder to the umbilicus, and attended with nausea, vomiting and marked prostration.

"An icteric hue with or without pain, points to Chionanthus as the remedy."

Here's a dandy:

Dr. Miles with his "Heartcure" has nothing on Crataegus. "Specific Crataegus is a tonic to the heart and blood vessels. It is adapted to both functional and organic heart disorders, characterized by pain, oppression in the heart region, shortness of breath, rapid and feeble heart action, with evidence of cardiac hypertrophy, with mitral regurgitation from valvular insufficiency, in valvular deficiency without hypertrophy, in tachycardia, cardiac neuralgia, pericarditis, endocarditis, myocarditis so-called rheumatism of the heart, dropsy depending upon weak heart action, and in apoplexy, vertigo, spinal hyperemia and venous stasis."

Now all you folks who would have old age deferred take Cartaeagus.

The last of this group to be called to your attention is Echinacea and her mongrel offspring echitisa, echthol and echitone. This drug has been claimed to be a specific for rat-

lesnake bite, typhoid fever, syphilis, diphtheria, et cetera.

And you call yourselves doctors, and you are called upon, to pass judgment on the sanity of your neighbors.

What would you, or what could you say if this sort of locus pocus were practiced upon the family of an ink slinger of one of the yellow sheets, should he become wise to your pitching, would you have the temerity to call in to your assistant the State defense contingent?

Let's turn over, instead of being a night mare this might turn out to be a reality.

My friends, you are the owners of the two best properties in the world. They stand for enlightenment and truth, did you give them the courtesies that are their due you would never fall for these vagaries that have been brought to your attention; and I would call your particular attention to the six reasons: Your JOURNAL and that of the A. M. A., and the United States Pharmacopoea.

They are yours. You fathered them. Why don't you sustain them?

To close, your attention is called to the Six Reasons with their pedigrees published in the October 31st, 1914, number of the *Journal A. M. A.*, as to why the Proprietary Evil is still with us.

Splenectomy.—Five unselected cases of splenectomy for pernicious anemia—the operations performed in the West Medical Service, Massachusetts General Hospital—are reported by R. I. Lee, B. Vincent and O. H. Robertson, Boston, (*Journal A. M. A.*, July 17, 1915). The patients were all men between the ages of 31 and 54 years, showing varying grades of anemia. In two cases the anemia was so great that transfusion was performed before splenectomy. In all the operation was accepted voluntarily with full knowledge of its risks and the uncertainty of cure. The immediate results in all of the five were a prompt postoperative recovery and definite remission of the disease more marked than is usually seen. In four of the five the red counts rose from 4,000,000 to 5,000,000. The remissions were so constant that they are inclined to attribute them to the splenectomy. In spite of the marked improvement, however, the blood picture still shows the characteristic appearance of the disease, and in three of the five evidence of increased blood destruction was shown several months after splenectomy by the urobilin estimation. The disease, therefore, cannot be considered as cured, and from its nature it will be many years before the exact value of splenectomy can be determined. The only exact conclusions they can draw, they say, are: "Splenectomy is not a very serious operation in pernicious anemia, and it offers a definite means of inducing a remission

A PLEA FOR EARLIER, LESS AND BETTER SURGERY.*

By W. E. SENOUR, Bellevue.

Every means known to science is being utilized for the production of a more perfect citizenship. Efforts to conserve and distribute human energy economically are international. The demand for increased efficiency in every line of human endeavor was never more urgent than now. In response to this demand the surgeon of to-day seeks his cases earlier while the disease is still localized, the opsonic index high, the vis medicatrix naturae active and the mind buoyant. With such an environment an operation may be done in the shortest time with a minimum degree of shock, and the least sacrifice of tissue. Such conditions always insure a rapid, safe and sure recovery free from post-operative discomforts. In no realm of human activity has the advance in modern thought caused such radical changes as in the practice of our profession. It was but a few years ago when the family physician was deemed competent to meet all the exigencies of life requiring medical or surgical aid. He was physician, surgeon, pathologist, oculist, obstetrician, etc. But with improved means of diagnosis and new methods of treatment the field has become so vast that one mind can cover it only in a general way. The whole trend of modern surgical thought is for earlier diagnosis, earlier intervention, greater care in the selection of operative cases and more efficient end results. A careful review of the statistics of all surgical clinics and hospitals demonstrate that all classes of disease which ultimately come for treatment by operation come after everything else has been tried. They look upon surgical intervention as a last resort. The time has long since passed when a surgical incision should be resorted to early if a scientific diagnosis is impossible without it. The time has likewise passed when the surgeon should operate upon carcinoma after metastasis has taken place, for at such a time the operation not only hastens the end, but discredits surgery.

A close study of immediate and late results demonstrates that the operative mortality is much greater, morbidity more common and the post operative complications more frequent and period of disability longer when an operation is performed in the latest stage of the disease.

Of what value is a brilliant diagnosis in a case of acute intestinal obstruction if three or four days are allowed to elapse with stercoraceous vomiting and the development of peritonitis. Such a diagnosis calls for the undertaker and not the surgeon.

Of what value is an accurate diagnosis of a ruptured ectopic pregnancy if the patient is moribund from loss of blood when a surgeon is called.

These are the conditions confronting us at the present moment. How may we correct them? My answer is: by education and co-operation. Since 90 per cent of all physicians are general practitioners and 85 per cent. of all operative cases first apply to them for relief the solution of the problem depends very largely upon their ability as diagnosticians and teachers. Their knowledge must be general and accurate. They must be alert for the acute death dealing diseases such as perforating gastric and duodenal ulcers, acute intestinal obstruction, gall stones, internal and external hernia with strangulation, fulminating appendicitis and ruptured ectopic pregnancy. They should be familiar with the classic signs and symptoms of those diseases that they may be able to differentiate between the real surgical conditions and intestinal pain due to fermentation and constipation. They must learn to appreciate the significance of abdominal pain since it is nature's most impressive and important danger signal. It is pain that awakens the patient to a realization that something is radically wrong. It is pain that informs the trained diagnostician that a human life is at stake. In almost every acute abdominal lesion as well as a few of those of the chest, sudden, severe abdominal pain is an invaluable symptom. It is the one early symptom that appears at a time when the prompt and efficient application of the proper remedy would prevent the fatal issues. If the general practitioner could always appreciate the significance of that appeal and apply the proper remedy the results would be ideal, but alas, how frequent does the medical attendant fail to recognize that cry for help. It may be the cry of a strangulated dying intestine begging for liberation; it may be an inflamed pulsating appendix demanding immediate excision; it may be an infected peritoneum pleading for drainage; it may be a distended gall bladder seeking relief from irritation by stones, in order to prevent death by cancer a little later. How often are these cries misunderstood or ignored and the pain hushed with the hypodermic syringe, resulting in many instances in the sacrifice of a human life. To the painstaking and experienced practitioner a severe pain in the abdomen always creates alarm. It arouses suspicion of some serious lesion. If unable to determine its meaning he calls to his aid the surgeon, they study the case together; if still in doubt he calls the pathologist and maybe the Roentgenologist. If the case is too grave or the symptoms too urgent to permit of a careful study of the case in all its details an

*Read before the Campbell-Kenton County Medical Society.

exploratory incision for diagnostic purposes is justifiable. It is just here that the writer desires to impress upon the general practitioner the importance of securing a history of the case to ascertain if possible what preceded, accompanied or followed the sudden onset. The site of the initial pain is always of more diagnostic value than the diffused pain noted later in the disease. To illustrate; the initial pain of duodenal or gastric perforation is complained of first in the epigastrium but later becomes localized in the appendiceal region. This accounts for the difficulty of differentiating between the two lesions. The general practitioner must understand that a severe persistent pain in the abdomen is no longer diagnosed as neuralgia, no longer regarded as the cry of a hungry nerve. He must understand that pain is nature's most trusted messenger appealing for prompt and efficient assistance. He must understand that sudden severe pain in the epigastrium may be due to appendicitis, cholecystitis and acute hemorrhagic pancreatitis; a perforating ulcer, an obstructed intestine or perhaps a perforated gall bladder. He should also remember that in appendicitis the pain becomes localized at McBurney's point. In cholecystitis it shifts to the right hypochondrium. In perforated gall bladder it may become localized in the region of the gall bladder or in the appendiceal region.

The failure of the general practitioner to appreciate the significance of pain explains why so many of these cases reach the surgeon at a time when surgery is of no avail. It also explains why so much needless surgery is being done.

The surgeons themselves, must become better diagnosticians and better pathologist both macroscopical and microscopical. They must keep records and statistics that are reliable and give the results of their findings at the operating table to the general practitioner. At clinics and hospitals that have the pathological proofs must work up their statistics so that we may increase our evidence that cancer has been cured when operated upon very early. We should also impress upon the laymen the fact that the percentage of cures in the fully developed cases is extremely small. Impress upon the women of this country that 80 per cent. of the tumors of the breast are malignant or become so later in life if not removed. Teach them that the prime object of exploring every lump in the breast immediately is not so much to remove possible benign tumor as to remove cancer in its most curable stage.

In all cases of lump in the breast the invincible rule should be that when in doubt the lesion should be treated as malignant and a radical operation performed. Until quite

recently the number of patients applying for treatment for lump in the breast was about 10 per cent. In the past two years the number has increased to 20 per cent. Thus we observe as the profession becomes more alert and the laity becomes better educated as to the necessity of attacking these growths early while they are benign the percentage of patients applying for treatment will rapidly increase.

The inoperable groups of internal cancer will not be reduced until we have educated ourselves and others to understand that the object of exploratory incision in a large number of cases is not so much for the relief of symptoms as the prevention against death from cancer. We do not always remove the appendix to relieve the patient of pain, often only to protect him from dying from peritonitis.

Teach the public that 90 per cent of all cases of cancer of the gall bladder are produced by stones, teach them that they cannot be dissolved and therefore must be removed by operation. We must educate the public to be willing to undergo an operation at a time in every disease when the chances of cure are best and the dangers of operation least.

A careful review of their statistics by the great life insurance companies of this country had convinced them of the great value of education in the prolongation of human life. In view of this knowledge they launched a vigorous educational campaign. To day they are teaching their policy holders how to live longer and more effectually, how to take in time those diseases to which they are subject and which if they are allowed to go unchecked will lead to death, and how by skilled help their lives may be prolonged by a careful and systematic examination at stated periods by competent medical examiners, this will enable the surgeon to get his cases before the disease is so far advanced that the patient recognizes it himself. It will be treated and operated upon at an earlier period with a correspondingly better chance of success.

It is the duty of the modern surgeon to point out to the insurance company to what extent an average risk may be increased by a surgical operation and whether the patient would be sufficiently benefitted and life prolonged by such intervention.

It then becomes a matter of economy for the insurance company to have the operation performed as early as possible.

Early operations in all surgical conditions are economical procedures. The expense to patient is less, period of disability shorter. In most cases of external cancer the lesion may be removed under a local anaesthetic, the patient need not remain in the hospital but

a day or so, whereas the disability after a radical breast amputation is three or four weeks. The period of disability after pylorotomy or hysterectomy should not be more than three or four weeks. Operation in the early stage of these diseases has no mortality, the post operative discomforts are nil and the period of disability short. Delay always means greater expense, more danger and less chance of a cure. We must educate the people to undergo treatment while their disease is curable, if it be cancer before metastasis takes place, if intestinal obstruction before the patient is overwhelmed by toxins, if strangulated hernia before the vitality of the intestine is destroyed. If ulcer before perforation take place or cancer engrafts itself upon its base, if it be a lump in the breast before it becomes malignant, if appendicitis before it produces peritonitis.

The modern surgeon as a teacher should impress upon the general practitioner that the object of surgical intervention is just as much for protection against cancer as relief of symptoms of ulcer. In the early stage of ulcer symptoms the chance of curing cancer are the best. He should teach the people that perforation of acute gastric or duodenal ulcer is, with the exception of appendicitis, the most frequent acute abdominal lesion, it is a condition in which mortality is directly proportionate to the number of hours that elapse between the perforation and operation. The necessity for early intervention makes it essential that the symptoms of perforation should be thoroughly understood by the general practitioner who usually sees the case first, for upon his diagnosis the fate of the patient depends.

The writer is convinced that the surgical treatment of gastric and duodenal ulcer will in time, when operated upon early, reveal as good results as the interval operation for appendicitis which is 1-2 or 1 per cent. Procrastination and expectant treatment of intestinal obstruction has reaped its thousands. The same comment applies with equal force to carcinoma, sarcoma and osteomyelitis. The time for late surgery, needless surgery and meddlesome surgery has passed.

While making a plea for less surgery permit me to sound a warning against the indiscriminate and even the frequent use of open operation in the treatment of fractures. With the aid of the X-ray and anaesthesia we are enabled to obtain and maintain a proper position of the fragments without operation. If all efforts should fail, then operation may be considered. In my judgment good function is more important than the position of the fragments and is frequently obtained when the apposition is by no means perfect. In the reduction of most fractures a general

anaesthetic is necessary. In such a state of muscular relaxation reduction is easy. It is the opinion of the writer that the use of Lane's plates for adjusting fragments presents several features not consistent with ideal surgery. First it acts as a foreign body, when plates are screwed down tight they produce bone atrophy, this causes the screws to loosen up, thus its original purpose is defeated and union delayed. Experience and observation have convinced me that the indiscriminate use of Lane's plates in the treatment of fractures is unscientific, and that they should be used only in a few selected cases. Am also convinced that open operations are rarely necessary in cases of fracture that have been treated upon scientific principles from the outset. Before resorting to any operation a consultation should be held with the family physician or the practitioner referring case. After operation is finally decided upon the patient should be advised of the dangers and the hoped for results.

The hysteria that siezed the surgical profession a few years ago to operate upon all cases of ptosis of the abdominal organs is gradually passing away. The wholesale removal of the colon for the cure of epilepsy, constipation, rheumatism and many other diseases, needs only to be mentioned to be condemned. While there may be a few cases where its removal may be justifiable, in the opinion of the writer that number is very small. Since it is impossible on account of changed conditions to treat disease single-handed, at the present time the writer believes that the medical men of every community should form themselves in groups representing the various specialties for the purpose of studying disease and arriving at an accurate diagnosis more promptly. This grouping of medical men representing special lines of study and work would prove the means of arriving at scientific diagnosis earlier. Patients should be referred to their group to secure a scientific diagnosis. After this has been accomplished the patient should be returned to the physician referring him and not peddled around to the various specialists until his financial, physical and mental resources are exhausted. In this way the family physician would not be robbed of his patient and the patient would be given an opportunity of selecting a surgeon in whom he or she has confidence and under whose care they would have peace of mind, a most important factor in the recovery from any disease.

The obstetricians of this country must educate the mothers as to the great necessity of correcting congenital defects and deformities such as hair-lip, cleft palate, and the various

types of talipes as soon after birth as is consistent with safety. All physicians engaged in the inspection and examination of school children should impress upon parents the absolute necessity of the early removal of adenoids and diseased tonsils. In order to prevent mental defects and permanent physical deformities.

In concluding this plea for earlier, less and better surgery would urge that every internist and surgeon impress upon their patients the advantages of early operation and the dangers of delay. Teach them that procrastination in the diagnosis and treatment of all grave abdominal lesions has destroyed more lives than exploratory incisions. Teach them that the early surgery is less expensive, more safe and certain in its results, the period of convalescence shorter, post operative discomforts least, and the end results best.

THE CLINICAL SIGNIFICANCE OF THE FAUCIAL AND PHARYNGEAL TONSIL.*

By W. J. THOMASSON, Newport.

Why is it that we hear so much about the diseased tonsils and adenoids? This question is asked us as physicians by the laity almost every day. Are the tonsils and adenoids a fad? Or are they diseased more often than formerly?

The answer to this question is that the diseased tonsil and adenoid is not a new thing, but was in the limelight as far back as the year 1122.

(1). Albucasis an Arabian physician, who died in the year 1122, described the tonsils in a diseased state and the manner of their removal.

(2). Forestus describes tonsillar hypertrophy and refers to them as small caruncles which all men have on either side in the backs of their mouths. This was in the year 1591.

The first reason that we have more diseased tonsils and adenoids now than formerly is that the population is greater than fifty years ago. The manner of living has changed. The hot air and steam heated houses, the gas stoves all help to lower the resistance of the individual.

Fifty years ago outdoor life was more frequently indulged in. Walking was cheaper than riding on poorly ventilated cars. Food was prepared at home and the teeth and maxillary bones were used to masticate the same. Now, food is prepared in large factories and the use of the jaw bones has become unfash-

ionable. Food is bolted without mastication, and the contour of the arch is changing.

The illy ventilated picture show-house was unknown. The shop was better ventilated. The basements of the large department stores were used for packing cases and not as sales-rooms that are breeding places for diseases that ruin the health of the young girl who is compelled by necessity to spend long hours in the poorly ventilated and overheated basements of the department stores.

Is it a fact that we have more diseased tonsils and adenoids in proportion to the population than fifty years ago?

Taking into consideration the changed conditions of living, and the environment, I doubt that there are many more individuals to-day, in ratio to the increased population, than fifty years ago that show abnormal conditions of the upper air passages.

One has to practice medicine but a short time or attend any of the nose and throat clinics where patients with abnormal conditions of the upper air passages come for treatment, till he is impressed with the large number of individuals beyond middle life, and the very old people that come seeking relief of symptoms that point plainly to conditions which existed in early childhood. Proper treatment at that time would have saved much suffering and conserved the earning powers of the individual. Few of these patients but give a history of head colds, tonsillitis, running ear since early childhood, and many have had a catarrh all their lives.

What are the sequels of these conditions? Or, in other words, what are these patients' symptoms and why are they seeking relief at this late day? They seek relief from head noises, many of them have chronic otitis media, dating from childhood with impaired hearing, and 95 per cent of them have retracted drum heads that point plainly to a tubal catarrh that was once an acute condition, and proper treatment years ago would have saved the individual the tinnitus, the loss of hearing, and last but not least, preserved the individual's earning power at the time of life when hearing is measured in dollars and cents. For it is a well known fact that a man with impaired hearing is not wanted in any of the mercantile or industrial occupations.

Another reason that we hear more about diseased tonsils and adenoids now than a few years ago is that the physician better understands the systematic sequelae, due to the focus within the diseased tonsil.

The tonsil and adenoid are examined more frequently and more thoroughly than in years gone by, and last but not least, since the radical removal of the tonsil with its capsule, has given such brilliant results, the physician can now assure his patients that they will

*Read before the Campbell-Kenton County Medical Society.

never again be bothered with tonsillitis or quinsy.

Decapitating, at best, removes but a small portion of the hypertrophied tonsil, and the sunken or diseased tonsil could not be reached by this method. The hypertrophied tonsil stump became capped over by scar tissue, retaining the focus to continue the infection.

If the individual escaped tonsillitis and quinsy, the sealed crypts could not be emptied, but became breeding places for bacteria that was carried to distant parts of the body by the lymphatics and blood stream, causing tuberculosis, joint lesions or some other systematic condition.

In days gone by it was the hypertrophied tonsil, any many of this type of tonsil are not dangerous tonsils, which was the one that was operated on by the decapitating method. The large appearing tonsil, in many instances comparatively healthy, was converted from the healthy state into one with its crypts sealed, the cicatricial tissue binding down the once free gland and converting the normal tonsil into a diseased one.

It is the buried tonsil that is the more diseased, and this type of gland is much larger than the hypertrophied type and has a broader base than the protruding tonsil. The location of this type of tonsil, the covering by the plica tonsillaris, and the adhered pillars all help to mask the size and diseased condition. This is the type of tonsil that cannot be removed by the guillotine, and neither can it be removed by either the Beck or the Schluter method without dissection.

Much has been written in the last few years on the function of the tonsil and beyond a doubt the normal gland has some function. Whether that function is to manufacture white blood cells, guard the system from invasion of bacteria, or to secrete a substance to aid digestion, I am unable to say. But, we know that a diseased gland cannot function, at normally and it is not the normal tonsil that is at issue in this discussion, but the diseased gland that is of interest to us from a clinical point of view.

All individuals have tonsils and adenoids, and all mankind, at sometime during their lives have pathological conditions of this lymphoid tissue. Some children are born with hypertrophied adenoids.

Tonsillitis in the very young is not a rare condition, and quinsy even in the aged has been reported.

The high fever in the young child is frequently due to an inflamed adenoid. Acute otitis media is never caused by the cutting of the teeth but is due to the diseased, inflamed lymphoid tissue in the post nasal space. A focus within the tonsil, even in those beyond

middle life, has caused infection in some remote part of the body.

In many individuals of middle life, large overgrowths of connective tissue that was in early life adenoid tissue, block the post nasal space, interfere with the Eustachian tube and cause much hacking and spitting. These individuals can be very much benefitted by the removal of this tissue and the catarrhal condition which they have complained before the operation, will be much lessened.

The question may be asked—what per cent. of people in this climate have diseased tonsils and adenoids? We believe that practically all individuals have more or less disease of this lymphoid tissue. Many tonsils at a casual glance do not appear diseased, but on close examination they will show one or more degenerated crypts, and many children apparently with healthy tonsils and adenoids will have enlarged posterior cervical glands due to foci within the adenoid.

Many individuals come under observation with apparently normal tonsils, without a history of tonsillar involvement, yet on examination, debris will be found in many of the crypts, the pillars bound down, and thin pus oozing from diseased crypts or from between the tonsil and the pillars. In many cases without marked pathological changes within the tonsil, examination of the ear will reveal a retracted drum head, adhesions of the ossicles and the hearing will be diminished in one or both ears. It is in these cases that you will find a small post-nasal space and a small amount of adenoid tissue that will prove to be the cause of the change within the middle ear and the cause of the defect in hearing.

A small amount of adenoid tissue in a small post-nasal space will in many cases cause more trouble to the individual than a large adenoid will in a large roomy naso-pharynx.

We are all familiar with the great amount of prostration following acute tonsillitis. Is it not a fact that many a case of tonsillitis is looked upon and treated as a local trouble within the tonsil? It is undoubtedly a local condition for the first few hours, but soon becomes a systemic condition with a general infection that demands systemic treatment.

Diphtheria but a few years ago was considered a local condition, and we all recollect the struggles of the unfortunate children and the untold suffering of the individual, in our efforts to make applications to the site of the membrane within the throat.

Just a word as to some of the clinical symptoms found in the very young child with adenoids. The babe is unable to take the breast for any length of time. He is restless, cross and peevish. Awakens from sleep with a start and appears as if he had a head cold.

Nature sends the child into the world with

the instinct of nasal breathing, and he must acquire the habit of mouth breathing; and in learning this habit much air is swallowed, hence the colic of many of these children. Should the child escape the colic and be fortunate enough to take nourishment to sustain life and the obstruction in the post-nasal space be not removed, the lower ribs and the sternum become retracted, the chest narrow and the well known pigeon breast is established. Mouth breathing perverts the nasal mucosa and it does not perform its function in preparing the air before being taken into the lungs. The nasal bones undergo changes, the septum may become deflected and the germ-laden air prepared the lungs for early habitation by the tubercle bacillus. Later, the child with adenoids habitually has head colds, the Eustachian tubes become inflamed or occluded, he has earache and may have retracted drum heads with adhesions of the ossicles, a middle ear infection, frequently followed by a mastoid involvement.

The tonsil, on the other hand, has been accused of practically all the ills to which the human body is heir.

Undoubtedly this gland of lymphoid tissue has in many instances been wrongfully accused. And the tonsil many times has been abused by improper treatment and meddling surgery.

We wish to go on record as saying that all tonsils should not be removed. But, if it is necessary to remove the tonsil for any cause, then it should be done thoroughly and with the greatest care, that the surrounding tissue, that is, the soft palate, the uvula and the faucial pillars should not be damaged. For if these structures are damaged, the individual will have unpleasant complications that no form of treatment will overcome.

Let us study some of the clinical conditions due to the diseased tonsil.

First, follicular tonsillitis, a condition which is local for the first few hours, and one which may be aborted in many instances if early and properly treated. On the other hand if neglected there is no part of the body that may not suffer from the invasion of the bacillus that causes the infection.

We have all seen joint lesions following even the lighter attacks of tonsillitis. Heart complications, endocarditis and pericarditis often follow this condition, and it is not an uncommon thing to find albumin in the urine of the patient during an attack of tonsillitis. Other conditions attributed to diseased tonsils are acute or chronic nephritis, infectious jaundice, appendicitis, pulmonary gangrene, neuritis, osteomyelitis, cervical adenitis, either simple or tubercular, and chronic toxæmia without localized lesions other than those within the tonsil.

We are unable to say whether these infections find their way to distant parts of the body by the lymphatics or by the blood stream. Undoubtedly they both act as a means of conveyance, but from clinical observation we believe that the farther the lesion from the tonsil, the more the blood stream is to blame as the mode of conveyance.

Investigators have found many tubercular tonsils, and unfortunately many tubercular patients have had their tonsils removed during the active stage of the disease, and quite a few tubercular patients with the disease in a passive state have been operated on with the result that the tuberculosis at once became active, and many of these cases have had their days shortened by the operation.

On the other hand, some men claim that large numbers of tubercular patients can date the starting of the tubercular process from the removal of the tonsil.

We cannot agree with these men, and believe that the tubercular condition had been overlooked and the individual would have developed an active tubercular condition whether the tonsils were removed or not. But we do believe that many times the removal of tonsils in tubercular patients lowers their resistance and increases the tubercular process.

There is a close relation between the tonsil and the thyroid gland and several individuals in our own practice that had diseased tonsils associated with enlarged thyroid, on the removal of the tonsil the hypertrophy of the thyroid disappeared.

Observation has shown that many of the individuals with enlarged thyroids have had tonsillitis, and many more of these individuals, even if they give a negative history on the part of the tonsil, close examination of the tonsil will disclose thin fluid pus oozing from between the tonsil and anterior pillar, or by palpation of the tonsil, pus will be found in one or more of the crypts. And if pus cannot be demonstrated, diseased crypts can always be found. In other words, a large per cent. of all individuals with thyroid enlargement have diseased tonsils.

One of the chosen locations for diphtheritic membrane is on the faucial tonsil. The Klebs-Loeffler bacillus is found in the throats and mouths of supposedly healthy individuals. Those with diseased tonsils, that is, the tonsil with the epithelial lining of the crypts impaired, are more likely to come down with the disease than the individual with normal tonsils.

In three epidemics of diphtheria, occurring in three separate years in an institution comprising about ninety individuals ranging in age from three to eighteen years, those children that had their tonsils removed escaped the infection. In other words, the child with

diseased tonsils is in greater danger of contracting diphtheria than the child that has had his tonsils removed.

Quinsy. This condition is due to an infection of one or more of the crypts in the upper pole of the tonsil. These crypts drain into the super-tonsillar fossa, which is usually a closed cavity.

In other words, quinsy is a deep-seated abscess above and behind the tonsil, and the pressure of the confined pus in this closed cavity causes intense suffering to the individual, and interferes with the taking of nourishment. These abscesses should be opened early to conserve the vitality of the individual, to relieve the suffering and to prevent toxæmia.

These abscesses can be opened without danger to the large blood vessels. In fact a quinsy abscess is a long way from a vital spot, and if one takes the pains to know his anatomy and learns to see what he is doing, the abscess can be opened early, the individual saved much suffering, and restriction very much hastened.

Streptococcic Sore Throat. In the last few years this form of infection has been rather common. The epidemics have been reported from Boston and Chicago, and sporadic cases have been reported from all parts of the country. The epidemics that occurred in the above named cities were traced to the milk supply, the infection either being caused by an inflammatory condition of the udder of the cow, or by contamination of the milk supply in being handled by one infected with tonsillitis.

The throat is very red, swollen, and deglutition is painful and in some cases almost impossible. Prostration is marked. The cervical glands are enlarged. The deposit on the tonsil springs from the crypts and coalesce, in some cases resembling diphtheritic membrane.

Peri-tonsillar abscess is a frequent complication. In other cases the tonsillar tissue, the soft palate, in fact all the tissue within the throat is much swollen. A general phlegmatic condition without pus formation is frequently met with.

In one case seen lately in consultation with Dr. Heffin, the throat resembled a quinsy, and after making a long dissection between the capsule and the pillar, no pus was found, but much dark thick blood poured from the incision. In this case the site of the incision, in a few hours was covered with an ill-smelling membrane, resembling diphtheritic membrane. This patient developed a double pneumonia, was much prostrated, with weak pulse and high fever. With the aid of the mixed vaccine she made a slow but complete recovery.

In these cases the general and local treat-

ment of tonsillitis should be used, and mixed vaccines should always be considered.

Just a word as to the tonsils as portals of infection. Much has been written on this subject pro and con. Personal observation of patients after the removal of the tonsils has convinced us that they are undoubtedly to blame for many of the ills that the physician is called on to treat. If our reasoning is wrong, why is it that all of these patients take on weight, their anaemia disappearing, the health improves, the cough clears up, the heart action is better, joint lesions disappear, the thyroid gland is reduced in size, the enlarged cervical glands become normal, the nasal symptoms abate, and the child that was looked upon as an invalid or deficient becomes the leader of his class, the young woman returns to her work with new vigor, and the mechanic does a man's work among men?

What is the normal tonsil? I do not know. We, as physicians, do not see normal tonsils. Some say there are legions. This I doubt, for the more throats we examine, the more are we convinced that very few, if any, individuals have perfectly normal tonsils.

Can you call to mind many individuals in the families of your clientele that you have not treated at sometime for some condition within the throat or upper air passages?

You will at once say that you can recall many of your patients that do not need their tonsils and adenoids removed. We agree with you, yet you will have to admit that many of them have some variation from the normal.

Not every tonsil that shows a defect, or every adenoid that can be seen or felt should be removed. But when the tonsil is much diseased, or by its size interferes with normal breathing, or the individual is having tonsillitis, earache, or enlarged cervical glands, or when he has lesions located in other parts of the body, that may be due to a focus within the tonsil, and every effort should be made to trace the infection to other foci than the tonsil, when by elimination, all points to the tonsil or adenoid as the point of infection—then the offending tonsil and adenoid should be removed.

Let us give up the idea that the child is too young, that it must be built up, that it is not the time of year for their removal. You would not think of postponing the drainage of a ruptured appendix till ascertaining the time of year. Neither would you take a chance of building up the health of the individual, with the infection being poured into the abdominal cavity. Then why take the chance with the tonsil that you know is diseased and the focus of infection? However, there are conditions, such as acute tonsillitis, tuberculosis, kidney complications, or during the attack of the

acute infectious diseases that the removal of the tonsil is contradicted.

It has been proven without a doubt that there is no more danger in removing tonsils and adenoids under proper conditions in a hospital, with good nursing and attention to detail before and after the operation than there is in doing any other operation.

But there is danger in doing this operation in the home of the patient, without attention to detail, without trained assistance, and with a haphazard anaesthesia, especially in the giving of chloroform.

(3). Jonathan Wright says, "The sooner the practitioner gets over the idea that the tonsils are heaven ordained structures created by special Providence for the repletion of the purse of the laryngologist, the better it will be for the dignity of the medical profession." (Page 331).

How shall we examine the tonsils and adenoids? Get the confidence of your patient. Use your head mirror either with artificial or sunlight. Examine every part of the tonsil, the crypts, the space above the tonsil and the space between the anterior pillar and the tonsil. This is easy in most of the cases. Use a narrow spatula to palpate the tonsil, and the pillars can be retracted by this instrument or with a blunt hook. In using this method practically every part of the tonsil can be examined.

If the examination of the tonsil as outlined above is followed, you will be surprised at the number of apparently healthy tonsils that will be found to be oozing pus. In others the crypts will be filled with debris, and others will contain secretions that will surprise you in quantity and odor.

The sense of touch is a far better method in examining the adenoids in children. This is done by inserting the index finger into the post nasal space and feeling the adenoid on the posterior naso-pharyngeal wall, the small laryngeal mirror can be used in examining the post-nasal space in the adult, and many individuals beyond middle life will reveal to you a large bunch of connective tissue that was in early life adenoid tissue.

Just a word as to the treating of tonsillar conditions. Treat them as foci of infection. Treat every crypt, get into the supertonsillar fossa if possible. Then treat the tonsil. There is nothing better for local application to the tonsil and the space within the gland than silver nitrate.

REFERENCE.

1. Wright. History of Laryngology and Rhinology. page 102.
2. Wright. History of Laryngology and Rhinology. page 142.
3. Wright and Smith, page 331.

TUBERCULOSIS IN INFANCY AND CHILDHOOD.*

By CLAUDE YOUTSEY, Newport.

It was with some hesitancy that I selected this subject and I hope the society will pardon me for presenting a subject in which so few new ideas have been advanced during the last several years. But if I can convince the members of the frequency of this condition in infancy and early childhood and impress upon them that latent tuberculosis started at this period of life is the cause of so many of the deaths of young adults then the purpose of this paper has been accomplished. I am absolutely convinced that while our organization and societies are doing a great and a commendable work in the prevention and eradication of tuberculosis that much more can and will be accomplished in its ultimate eradication by closer observation and an earlier recognition of this condition in childhood.

To impress upon you the prevalence of this condition, I might give you some interesting mortality statistics coming from Roumania, stating that out of every one hundred children dying in that country one-third of them die of tuberculosis. While in the various clinics over the world established for the treatment of children (under the Moro or von Pirquet tests) report from 60 to 90 per cent. of all children having tuberculosis and some writers go so far as to say that it is the most common disease of childhood, in fact greater than all the others put together, applying of course to the chronic forms.

The cause of tuberculosis is of course apparent while the method of entrance of the germ into the body is still much disputed. Since tuberculosis in children is lymphatic in origin to a large degree (in fact some authorities go so far as to say that primarily it is always lymphatic in origin), the supposition is that it is through the upper air passages that it first gains entrance to the body. Some writers claim that due to the abrasions produced in the gums during dentition that it gains its entrance then and this might be borne out by the fact that it is rare indeed to see a case of tuberculosis in an infant under the third month. Others claim that it is taken into the body through the alimentary tract, this theory seems to be gaining ground on account of the large number of cases that are found, post mortem in which the mesenteric glands are involved.

The great cause of the spread of tuberculosis is two-fold to a large degree: (1)

*Read before the Campbell-Kenton County Medical Society

Sputum, either dried or moist and a case produced by direct infection from the moist sputum is more virulent than that from the dried, and (2) from milk. This brings up the much discussed question as to whether there are two kinds of tuberculosis, human and bovine. That this is a fact seems to be agreed upon by the late writers and that while the symptoms produced by both are practically the same, those of bovine character are much milder than those produced by the human bacillus.

That tuberculosis can be spread by the feces, urine, or from the discharge of broken down ulcers is a fact but these factors are not as potent as the two others mentioned.

The theory of direct inheritance of tuberculosis has long been discarded or that it can be carried by the spermatozoa or the ovum has never been proven. Yet almost forty cases have been reported of direct inheritance in which the mother had a tubercular placenta. We long believed that children inherited a predisposition to tuberculosis, but this theory seems to be giving way to the one that children of tubercular parents inherits only a lowered vitality or resistance not alone to tuberculosis but to all other contagious or infectious diseases.

That the frequency of this condition in children is dependent on age goes without saying. It reaches its maximum about the 18th to the 24th month and then gradually diminishes as the child grows older. Virulence and frequency go hand in hand and as the child's power of resistance increases the virulence of the attack will diminish.

Crowded school-rooms, poor ventilation, and house infection are also important causes in the production of this condition.

The pathology of tuberculosis is practically the same in the infant as it is in the adult and since this paper as said before deals only with that class of cases known as lymph node tuberculosis, which is by far the most common form, the pathology and symptomatology of the other forms will be omitted.

On account of their location and their close proximity to the more vital organs of the body the involvement of the bronchial glands cause the most trouble. In primary mesenteric involvement which becomes active, secondary involvement of the bronchial glands is the rule, while the contrary of this rule is not so apt to be a fact.

The peritracheo-bronchial glands are divided into three groups. (1) the tracheal glands are located on both sides of the trachea, beginning on the right side in the angle of the trachea and right bronchus, they ascend along the trachea to the subclavian vessels. On the left side they begin at the same point and

ascend to the arch of the aorta and recurrent laryngeal nerves.

This group of glands are in relation with the arch of aorta, the recurrent laryngeal and pneumogastric nerves, the pulmonary artery and the superior vena cava.

The second group is situated in the angle formed by the bifurcation of the trachea and extends along the large bronchi. They are in relation with the large bronchi especially on the right side and with the oesophagus, aorta and pneumogastric nerve. The third group extends along the bronchi into the lungs and are associated with groups of glands in the angles of the bifurcation of the large bronchi, as far as the fourth bifurcation and with the veins and arteries which accompany the bronchi into the lungs. The anterior mediastinal glands are in relation with the right innominate artery and the right subclavian artery and the arch of the aorta. While the posterior mediastinal glands are in relation with the esophagus and aorta. The cervical glands both superficial and deep are unconfined and their enlargement can readily be detected. These are of course in close relation to the nerves and vessels of the neck.

I have taken up your time with the anatomical relations of these groups of glands (which was taken from Pfaundler and Schlossmann and Rochford's Diseases of Children) because as you can readily see that enlargement of these glands varying in size from a pea to a hen's egg and being in an enclosed cavity where they cannot be seen or felt and in close relation to the various tissues that I have described to you, the relative number of symptoms that can be produced both direct or indirect.

The pathology that is produced in the glands by tubercular infection is so well known to all of you that it is useless for me to repeat it.

SYMPTOMS.

The onset of this condition is very insidious and the child passes from one in perfect health to that of disease. The appetite becomes poor, the cheeks lose their color and the child grows thin although they grow in height. Temperature at irregular times might be found and general examination will reveal very little.

"In fact the lack of cause for the change in the general condition of the child is truly characteristic of tuberculosis of the bronchial lymph nodes," says Schlossmann.

Other cases may run a more severe course, after a short preliminary stage, temperature of 104 degrees may set in and continue for several weeks, gradually falling by lysis. These types of cases are often mistaken for typhoid fever or acute miliary tuberculosis.

The fever curve is usually atypical, it is sometimes broken by marked remissions or it may be continuously high.

When the glands become very much enlarged some say that they can be noted by percussion, but I believe the idea is rather far fetched. If this is possible the areas in which it can be best elucidated are over the intrascapular spaces at the level of the second and third dorsal vertebra or over the upper portion and side of the sternum.

Very little can be heard by auscultation but in some cases roughened, harsh respiration, especially during expiration, can be noted. Some authorities state that this can best be heard on the left side.

Cough is an important and sometimes a characteristic symptom, it occurs in prolonged attacks at intervals of hours and very frequently resembles whooping cough. The attacks of coughing are evidently due to pressure, especially on the vagi nerves.

Pressure on the trachea produce the ordinary symptoms, such as dyspnoea, cyanosis and possibly suffocation. If the pressure is on one bronchus the failure to functionate of that part of the lung so governed is a result, while pressure on the esophagus will produce pain, difficulty in swallowing and even starvation might result in the extreme cases. Pressure on the blood vessels, especially the large veins, produce the ordinary symptoms of venous stasis.

Simple anemia of the chlorotic type is a most important and constant symptom, in fact it is said that when we see a child who is failing in health and anaemic without apparent cause we are justified in making a diagnosis of lymph node tuberculosis and treating him for same.

These children are as a rule of a neurotic type and a large number of them suffer from either, chorea, incontinence of urine, night terrors or nervous irritability. Precocity is also a common symptom in the beginning of this condition but it is not lasting for as the disease progresses precocity disappears.

As I said before loss in weight or the failure to gain in weight is an early symptom and failure to gain in weight bears the same relation in a child that the loss of weight does in the adult in tuberculosis.

Pain in the side and dyspnoea which are markedly increased on exercise are very common symptoms and are usually seen early.

DIAGNOSIS.

The diagnosis of this condition ought to be made relatively early if we remember, the loss of weight, anaemia, the neurotic symptoms, precocity, exposure to tuberculosis (no matter how long past) pain in the side, intermittent fever and the characteristic cough.

In addition to this our diagnosis can easily be confirmed by the use of the X-ray or the tuberculin test. I might say here that while both the tuberculin tests (Moro and von Pirquet) are diagnostic, most writers agree that in addition to its convenience and simplicity the Moro test is the most satisfactory.

TREATMENT.

Of the treatment I will say very little, since it is entirely tonic in character, but if our diagnosis in these cases is made early you will find it is a pleasure to treat these children, since they respond so rapidly. The correction of any defect on the part of the nose or throat of these youngsters, to give them more breathing space is very important. Larger doses of pure fresh air both day and night, and plenty of sunlight is of utmost importance. Remove them from their tubercular surroundings when possible and send them to the country or in those cases which are so fortunate as to be able to do so send them to a climate which is constant. Feed them on foods which are good and wholesome and always keep a sharp eye on their digestion.

MEDICAL TREATMENT.

The medical treatment varies with the different cases. Cod liver oil, extracts of malt, syrup ferri iodid, or the sacch carb. of iron and Fowler's solution are all useful. The cough and nervous symptoms are best controlled by sedatives given at night, such as tincture belladonna, bromides and chloral. Opiates are seldom needed, while the fever can be controlled by rest, hydrotherapy and some of the milder antipyretics, such as salicyrine, phenactine, etc. In my experience the most useful of all drugs in the treatment of this condition liquor guaiacol. It is used by inunction once a day in the infant and twice a day in the older children. Guaiacol relieves the cough, reduces the fever, is a lymph gland antiseptic and can be applied directly to the affected glands.

Since this is an age of preventive medicine I know of no condition in which this should be more strictly applied than in tuberculosis.

While our municipal, county and State Boards of Health are doing good work along this line, yet I believe that it will only be when we look upon tuberculosis as an infective disease the same as we do with scarlet fever, etc, and produce forced isolation that the desired result will be accomplished. No member of the family is in so great danger of infection as the infant with a tubercular mother or father and it is for the protection of these that I ask for forced isolation. While we have sanatoria, both State and private, scattered over this broad land of ours for the treatment of active tuberculosis, in the adult, but what of the children. It has only been

within the last several years that a movement of this kind has been started. I believe that if our officials, both County and Municipal, would establish country homes an open air play grounds for our children, they would leave for themselves, monuments that could never be effaced and leave to the coming generation a better and a happier manhood.

PREVENTIVE MEDICINE; REGARDING CHILDREN.*

By CAROLYN E. ZIMMERMAN, Newport.

While I was reading the card that came from our secretary, as to what subject I would select for a paper, my door bell rang, I answered, there stood two boys almost breathless, one said come quick, may be you can save a boy, who was covered up in a sand bank, we brought him home, but we cannot get a doctor.

I hurried on with the boys, but others had come in before me. But the lad of thirteen was past human aid.

The mother said she had forbidden him going to the sand bank where they had gone to play. The scene, of course, was like those at all homes where one is torn from the midst of loved ones, and was very sad. Then came a thought to me; had we a place where children could play and danger be at a minimum, that life would perhaps not have been sacrificed.

While I have thought of park and playground for a long time, this scene, however, impressed upon me so forcibly the fact that we as a profession, know how very important it is to have a place where boys can work off some of their surplus energy in various exercises.

So that brings before us the necessity of parks and playgrounds as preventive medicine. At Fourth and Overton, you all know that children skate by the hundreds; we must drive with great care, lest one may be injured. They seem to have a good time, and the street is the best that Newport has to offer. But we know not, what some man or woman suffers, whose nervous tension is such, that the noise made by the skaters is almost beyond endurance.

When I was a child, we needed no playground, everything west of York, east of Monmouth and south of Ninth, was open country and woods, everywhere was playground.

We had hills for coasting, frozen over ponds for skating, and no need to go to the Zoological garden, for we had cows, goats, pigs, geese, ducks and chickens on the streets, those animals kept the town cleaned up and

in a measure, it was preventive medicine, for garbage in those days was not collected. That, of course, was a half century ago, our city is now crowded, and all things have materially changed. The servant girl problem has forced many people to live in flats. Consequently so many children are raised within four walls, and on the street, and the modern conveyance of this age has increased the danger on the streets.

The little children want to get out, when they are able to crawl, and see a door open, they get outside as quick as a wink, and when it can walk, it runs away. Why? From fear that it must go back into the house. If you put a hat on your head, a child of 8 or 9 months, knows you are going out, and puts up its little arms and wants to go too. We know that all things alive turn to light and air.

With all the milk, food and shop inspection, and the great fight against the tubercle bacillus, and the report of preventable diseases, the average life is a little longer than twenty years ago.

I do believe that all people whose span of life reaches four score and more years were not born, neither were they reared in a crowded city, but somewhere in the country or the country village.

During the four years of the Civil War 250,800 fell in their ranks, and during the same time 700,000 died from tuberculosis. That takes us to another problem. What can be done with patients who are too weak to go to work, but they are able to hold and infect the child. We ought to have at some time, and I hope not in the far future, in every state, a sanitarium with hundreds of acres of land. In Kentucky and Virginia, in the mountainous regions, the land is plentiful to be had where all tubercular people, rich and poor, young and old, in the early and late stages, classed according to stage and circumstances, they should be permitted to marry, but unsexed so there would be no offsprings. Some would be able to work and earn some money, they could carry on their own business and manufacturing could be done, sent out into the world in general by complete sterilization, without any danger to the outside world, and not until that is done can we look for a lower death rate.

I know of a case, a man of 55 years, who was advised to go to the country. He did go to live with his daughter's family, about one mile from town, he sat around but there was nothing he could do, he spat wherever he pleased, and held the baby too. The son-in-law contracted the disease, died in one year,

*Read before the Campbell-Kenton County Medical Society

the father lived nine more months, to perhaps infect others.

Now that is only one instance. Could that man have gone to some tubercular colony, he could have earned a little, and perhaps the son-in-law might be alive to-day.

Another one, a woman of fifty, coughed and spit up a large quantity of pus, a young woman who is pregnant, is taking care of her mother. That is no place for her, but there is no getting away from it. Here, too, the danger would be less if there were a place to go. It would be a great expense for the State to take care of one, but how many others could be saved, and be productive to the State.

There was a patient examined at my office more than two years ago, he was told he had tuberculosis, he said Dr. So and So. of Cincinnati told him the same four years previous. So he has had the disease now for six and a half years and he still goes to the factory, and only now presents the appearance so characteristic.

In 1897 I wrote an article to the *Cincinnati Enquirer*, that spitting on the sidewalks should be prohibited. Some one told me I must be crazy, to want to tell the people where they should expectorate. I said maybe I am crazy, but the appearance of the sidewalks in the early morning is nauseating. You all know that much has been done to lessen the nuisance, so all things done must have a leader.

New York with all its people and money, too, applied to Dr. Geier, of Cincinnati, to lead in their Bundle Day. So it behooves us to lead and not let the social workers be the leaders.

It is therefore the opportunity and the duty of the physician as a public spirited citizen, to exercise foresight in this matter before business and material interests have so much encroached upon the available spaces, that their conversion into parks is so expensive as to be almost prohibitive.

Luther Burbank, Stark Harrison and others who experiment with plant life, do not plant anything within the shadow of a tree, but out in the open sunshine and air, and watch them from the first appearance to maturity.

Now we have to deal with human plants, and what do we offer? We have inspectors to look after the inspection of animals and quarantine whole states, to prevent the spreading of disease, and what can we do only look on, as the consumptive sleeps with and takes care of children and yet we cannot interfere, and when a consumptive dies the house is fumigated after hundreds have gone into the

home to view the remains. So fumigation ought to be done immediately after death.

Millions are spent on sanitariums for the cure of consumption, while no provision is made to give children light and air which would largely prevent the condition, which sanitariums try to cure. Then again no house should be built, that has only one window in a room, and all old houses should be inspected and the landlord be compelled to remodel the place to give proper ventilation and light, so our children get a better start.

Cincinnati has a nurse who takes tubercular children to spend the day at the Day Camp, and the open air school is for the same purpose; it does improve the condition of the children.

Those of you who have visited Golden Gate Park in California, know how well that place is equipped in caring for children, the nurse brings a great number of them every day and looks after their wants and returns them at night, at a small cost to the parents; then again mother's take turns about in taking out the little ones that leaves some mothers at home to look after the welfare of the rest of the family.

Now what has all this to do with preventive medicine? In my mind it has much to do with it. If children have outdoor exercise they are happier, because they feel better, they are not sullen, disobedient and quarrelsome; they are more willing to do something, and are not so apt to steal, they are tired, and seek their bed earlier, and are not apt to go to, or hang around show places to meet whomsoever they can. And our juvenile court would not have so many delinquents.

Now, what we should do, is to follow the infant from birth to maturity. First we deliver the mother, see her as often and as long as we see fit, then dismiss her.

While that little helpless infant is one of our best assets, it is often at the mercy of those around it, born perhaps to poor or careless parents. There is where our advice should be given oftener than it is, as to the care of infants and keeping them out in the sunshine and air.

Then we reach the age when they should attend the kindergarten, not so much for the learning, but for discipline which our American children lack.

The kindergarten should be under the head of the public school, and medical inspection should begin right there. So much good has been done along this line. Parent's attention has been called to the necessary treatment to nose, throat, eyes and teeth, and that good work in Newport now lies asleep; but perhaps there will be a day of resurrection.

Then comes the proper school age at six years. There ought be only one-half day ses-

sions, until they reach the eight year, because an energetic child will fret itself into a nervous state in trying to keep up with the work, when older they grasp the work quicker. The other half day spent in the open, would better fit them for next day's work.

Then we reach another age more critical, the boys slip away to the swimming hole on the river, they are fearless and lack caution, and every summer the water collects the toll.

At this age a walk to the playground would be interesting, and the return from the ball game or other exercise would promote an appetite for the evening meal, a good night's sleep, bright eyes, a clear mind, resisting power to disease, and they would be more capable and obedient. I believe that 50 per cent. of our high school girls menstruate scantily and irregularly, and both male and female are below the average height. The playground is not only for recreation, but also for the upbuilding of the moral character of boys and girls. Games provided which exercise body and mind at the age from 16 to 18 are needed, at that time they resent observation as to where they go and what they do, then is the time when they need skating, coasting and the proper dancing.

So what we would have appear in a nation's life, can be done in the public school. If this movement was begun, I know the children would do their part, and when a day would be set aside for a stroll to the woods not one child would be absent at the appointed time.

We have no place for a Sunday school picnic, or a place to observe a sane fourth of July, or Arbor Day; we talk about it and that is all the children know of it; we have no where to go, to observe May Day, where all things that spring from the earth are in full dress and the violet blooms unseen.

We want a place where there can be a picnic every day, not one or two acres, but nothing less than fifty. The auto bus has come to stay; the young should walk, the old can ride.

Our juvenile court is run at the enormous cost of over four thousand dollars per annum. All honor and respect to the court. But so few are benefitted for the amount of money spent. The number of delinquents advised or sentenced are most all beyond redemption, and those that are not beyond recall could be uplifted in our park and playground. If we take four times four thousand and apply it in the purchase of land for playground and park, it would benefit not a few but thousands and thousands not only for four years but for ever.

Newport, I know, cannot own a park beyond its limits, but it wont be long until a great area will be in its boundary and no land

to be had at a low figure. Whatever the profession as a body will advise can usually be had, because the people look to us for advice in all things pertaining to the health of the State. So, therefore, the physicians and the architect should be the leading spirits in the hygiene of the masses, as they are best fitted to direct such movements, and not lag and leave it to the laity and the social workers who have less knowledge and appreciation of the real requirements of the situation. We are aware that our best asset is a healthy young man and woman. So let us do more than tie the umbilical cord and set free the little wriggling baby to grow the best it can, often among people who know not its worth, nor the value of medical inspection.

SOME THYROID FACTS.*

By GEO. W. HERMANN, Newport.

That iodine is the active agent of the thyroid secretion (para-thyroid) is now absolutely established. The thyroid product is an iodized globulin.

King, over a century ago, traced the thyroid secretion to the lymphatics and showed that the fluid as well as the colloid passed from the thyroid vesicles to the lymphatics of the neck.

The more recent investigators have shown that the product of these organs passes into the perivascular lymph spaces; being then transferred to the larger cervical lymphatics, they are discharged by the right and left lymphatic ducts (thoracic ducts) into the subclavian veins and by way of the superior vena cava into the right auricle.

The removal of the thyroid only, produces morbid phenomena, the severity of which depends upon the age of the animal, the younger the animal the greater the morbid effects, though life itself is not necessarily endangered in the young. The animal fails to develop. The testicles remain small and fail to develop and even to descend, the ovaries are as a rule also atrophied.

Sterility due to nonformation of semen has been noted. Pregnant rabbits abort, hens produce very small eggs or none at all. The skin is rough, coarse and squamous, being in some animals considerably creased as in the aged and in others swollen, hard and resistant, as in myxedema. The hair becomes coarse and shaggy, losing all luster and tends to grow irregularly and falls out. The temperature, normal at first, steadily decreases until death ensues. The removal of the thyroid reduces the resistance to infections.

*Read before the Campbell-Kenton County Medical Society.

On the whole the removal of the thyroid gland alone gives rise in the young first to arrested growth, especially marked in the skeletal bones and sexual organs; second, to myxoedematous thickening of the skin, and third, to a low grade of intelligence with general apathy—as the syndromes recognized under the term cretinism, while in the full grown it causes the condition known as myxoedema.

Removal of the thyroid and parathyroid causes early death, while the removal of the thyroid alone as we have just seen is followed by a prolonged post-operative life.

Even when the thyroid is left *in situ* and the four parathyroids are removed we witness a typical syndrome, the prominent feature of which is spasm and convulsion tendency; which may range from tetany to violent epileptic paroxysms with foaming at the mouth during which attack the subject may die.

Herbivora, rabbits, sheep, oxen, horses, etc., whose food contains much less nuclein and other substances capable of forming toxic wastes, suffer less from tetany than do carnivora, such as cats, dogs, foxes, men etc., whose food contains considerable of these noxious and spasmodic bodies.

The thyroid gland has long been known to neutralize or destroy toxic wastes.

This explains also the beneficial and sometimes curative effects of thyroid extract in the tetany of gastro-enteritis especially in children.

The fact that toxic wastes are destroyed under the influence of the thyroid extract is shown by its marked action in puerperal eclampsia. Thyroid proving curative when given in large doses.

Sange found in the study of 133 cases that the thyroid enlarged and reached its maximum about the fifth or sixth month of pregnancy and that albuminurea occurred most frequently among cases which did not show this enlargement; hence the beneficial effect of thyroid extract. I have found nothing to compare with the thyroid extract in giving relief to the morning sickness and nausea of pregnancy.

Turro, the Italian physiologist, found that the juices of the swine and sheep thyroid dissolved almost entirely the comma, typhoid and anthrax bacillus, the bacillus coli communis and the streptococcus.

There is clinical and experimental evidence of a connection of the thyroid with the sexual system of men and higher mammals through its secretion, in that a lack of thyroid secretion influences sexual activity adversely; that sexual activity whether it be physiologic or pathologic, causes an over-

activity of the thyroid, and that this hyperthyroidism constitutes an index to the toxemia of pregnancy to counteract which the thyroids raise the antitoxic protective power.

There is abundant clinical evidence in support of the theory that what is termed a physiological overactivity of the thyroid is a valuable safeguard against the toxemia of pregnancy.

Evidence is accumulating to show that among the functions of the thyroid gland one of the most important is a protective action against circulating toxins. It seems reasonable that the thyroid gland among its antitoxic functions includes that of combating poisons absorbed from the intestinal tract.

Lane, Russell and Carson have all seen the removal of colon and sigmoid followed by the shrinking of a goiter.

Easterbrook after a careful study of the influence of thyroid extract in a large number of cases of various kinds, concluded that thyroid is a profound catabolic stimulant and that it greatly accelerates splitting up and oxidation of tissues.

Thyroid in excess produces tachycardia, tremor, headache, sweating and prostration, symptoms of Graves' disease.

The effects of thyroid extract on temperature are also well known. A rise of temperature has been observed in animals after the administration of thyroid.

It produces fever and is undoubtedly a pyrogenic agent.

That thyroid extract in overdoses does quicken the pulse, raise the temperature and cause loss of weight admit of no doubt.

Levi and Rothchild have shown recently that a large number of diseases attended by hypothermia or subnormal temperature, such as cyanosis, neuralgia, chilliness and so forth, yield to thyroid treatment.

From the standpoint of therapeutics and immunity, this fact is of commanding importance since it places in our hands a lever by means of which we can control the vital activities through the thyroid apparatus and enhance as we see fit the functional efficiency of the process through which the body protects itself from disease.

In the earlier part of the paper we followed the secretions of the thyroid and parathyroid to the heart and thence to the pulmonary alveoli.

Under the conditions it is very evident as to how the thyroid secretion enters the general circulation, it is absorbed by the red blood corpuscles and also by the plasma and distributed throughout the body.

Oswald has termed the thyroid secretion "thyroglobulin" and it corresponds with a constituent of the blood which renders micro-

organisms vulnerable to phagocytes, namely Wright's opsonin.

It has been shown experimentally that leucocytes are able to ingest bacteria only after the latter had been prepared, so to say, by some substance in the blood plasma.

Up to the present time very little has been determined concerning the source of the opsonins but all investigators state that the opsonins exist in the blood serum and not in the leucocytes.

The opsonins of Wright has the property of resisting the bacteria and preparing them for ingestion by the leucocytes.

Now let us see of what value is the thyroid extract as a therapeutic agent.

The official preparation in the U. S. P. is the glandular thyroid sicca or the desiccated thyroid gland, one part of which represents about five parts of the fresh gland. Its use is deemed dangerous by some. In truth there is no agent at our disposal whose effects can be controlled with more accuracy, if the symptoms it provokes are watched and if fresh preparations of thyroid are used.

Small doses one-half to one and one-half grains seldom prove excessive. The pulse may be raised slightly and there may be a rise in temperature of one-half to one degree, this is a result of exhausted metabolism, an expression of the remedy's toxic action.

Conversely when larger doses are given such as those employed in obesity, beginning with three grains three times per day and gradually increased, the hypermetabolism to which the reduction of flesh is due, keep the patient on the verge of a depressor action and more or less suddenly the pulse becomes faster.

Instead of being firm and somewhat harder than usual as in the case when the tonic phase of the thyroid action prevails, the pulse is softer and yields readily to pressure. The patient may complain of vertigo, weakness and palpation. The two conditions are radically different and therefore the danger signals of depressor action are clearly defined.

It is always best to discontinue the drug when the untoward symptoms occur and to employ smaller doses when the treatment is resumed. Thyroid preparations have afforded beneficial results in various disorders.

Their mode of action in myxoedema and cretinism is self-evident. In the various diseases due to lowered catabolism or the accumulation of waste products in the blood, such as tetany, puerperal eclampsia, epilepsy, the disorders of menopause, asthma and rheumatoid arthritis the beneficial effect of thyroid treatment has been noted.

It enhances the nutrition of osseous tissue and the process of repair, hence the improve-

ment noted in osteomalacia, rickets, osteomyelitis and the delayed union of fractures.

In infectious diseases including asthenic pneumonia, the exanthemata of childhood and typhoid fever, the value of thyroid preparations in small doses is readily accounted for.

They attach directly the pathogenic organism by rendering it vulnerable to the attacks of phagocytes and the bloods auto-antitoxin and insure the work of destruction by stimulating the governing center of the body's defensive mechanism.

Thyroid medication has not received the attention it merits in the treatment of thyroid enlargement in young girls just past puberty.

In these patients a parenchymatous enlargement often develops by reason of the great metabolic demand made upon the resources of the thyroid during rapid growth.

Small doses of thyroid gland twice per day in such cases have a remarkable effect in reducing the struma to normal size.

Thyroid gland on the other hand is strongly contraindicated in Graves' disease.

In pathologic obesity the behavior of thyroid is extremely uncertain.

The use of thyroid is strongly recommended in children suffering from adenoids.

In early cases and in doses carefully adjusted to each case it appears to make good, but after the condition has progressed to a point of mouth breathing, resort should be had to the surgeon.

Children bear thyroid preparations much better than adults, perhaps because their active thymus is able to neutralize the excess activity of the thyroid extract.

We must conclude from the foregoing facts just given, that the thyroid secretion is in some way connected with the process grouped under the term immunity. 1st, that the secretion of the thyroid is an active factor in the immunizing process; 2nd, that it takes part indirectly in the process of increasing the functional activity of the adrenals and general oxidation and metabolism, and 3rd, that the resulting increase in the functional activity of the organ which produces these protective substances correspondingly augment the blood in the quantity of these substances.

In spite of the extraordinary keenness of diagnostic power which has been developed in internal medicine, the painfully exact studies in pathological histology and in physiological and pathological chemistry, the widespread activity in pharmacological experiments and the effort of the manufacturing chemist to supply new drugs, the view is prevalent and rightly so, in the treatment of internal diseases that we have more to hope for the future than to be trusted to the present.

We can diagnose disease, describe it and

get a grasp upon it. but we dare by no means expect to cure it.

The death blow came first to polypharmacy and to-day, with many pharmacotherapy as a whole is almost moribund.

There never was a period in the history of medicine that promised so much to the internist as the present time.

Organotherapy is still in its infancy and we stand at this very moment upon the threshold of important and valuable discoveries which will eclipse and out-distance any of the discoveries and advances made heretofore in medicine or surgery.

I pray you do not become a therapeutic nihilist.

Internal medicine will in the near future be supplied with therapeutic weapons for superior to that of the scalpel.

PELLAGRA.*

By R. LEE BIRD, Covington.

Pellagra is not confined to any specific district but can be found in all sections of the South. If in the city principally in those sections not having sanitary connections. The ordinary back house or common privy being used, and in most cases very close to the house, very frequently a disease found in mining districts; Pineville, Kentucky, in one year sixty cases were reported from one camp of the Continental Coal Company. This camp was located on the hill sides, and on the side of the hill on which the sixty cases were found the common privy was used, the vaults not walled up and in many cases the ground had caved in filling up the vault, allowing the contents of vaults to flow out and spread out over the ground. During the winter all the old vaults were filled up with dirt and new ones were built, and the following year no case of pellagra was to be found in this camp. On the opposite side of the hill, in the same camp and during the year that the sixty cases were reported the privies were in good condition, and no cases of pellagra were found. Age and sex seem to have no bearing on the disease. The disease is milder in children, as a rule they complain very little with the disease.

Dr. W. A. Dearman, of Long Beach, Mississippi, in a paper read before the Harrison County Medical Society, February 4th, 1913, reported he had been able to produce symptoms and clinical signs of pellagra in a monkey and exhibited the animal, showing almost all of the typical signs of the disease. Later before the Mississippi State Association he

made similar announcement. This animal which was fed a large piece of pseudo membranous deposit, incorporated with saliva from a typical case of pellagra, the disease first manifested itself in the monkey. After an incubation period of thirty-seven days, the symptoms were complete loss of spirits, no inclination to walk or climb in cage, sitting in a drooped position, all diet which was heretofore taken was refused. From the initial onset there was progressive emaciation and prostration. Two or three days following the first manifestation of the disease there came on an intractable diarrhoea, very offensive, and showing at intervals mucus streaked with blood. Shortly following the diarrhoea, the characteristic skin lesions presented themselves which consisted in desquamation and exfoliation of the dorsal surfaces of the hands, involving lower portion of the forearms. Nineteen days after the first sign of the disease appeared the animal died. An autopsy was made about twelve hours after death. The gastro-intestinal manifestations being so conspicuous, well marked and developed, a culture from feces and subcultured on Endos medium and isolated a bacterium, closely allied to members of the colon group, and implicated this bacterium as a probable etiologic factor concerned in pellagra, he was unsuccessful in various attempts to produce the disease in other monkeys with this bacterium after having injected both cultured intravenously, subcutaneously, intraperitoneally and intracranially, and believing that pellagra was an infectious disease, he directed his efforts experimentally toward the rabbit as a probable susceptible animal to pellagra. Rabbit was injected with 2 c.c. of blood plus 1 c.c. of sodium citrate solution 2 per cent from a pellagrin. Four to six hours following the injection in the rabbit there came on signs of shock, dyspnoea, clawing at throat, paralysis of muscles of forelegs, rapid, catchy respiration, convulsions, unable to walk or stand, later the animal showing lesions on both ears, which consisted in erythema, also a slight diarrhoea, ptialism, loss of spirit, rapid emaciation, and prostration. The gums were injected and saliva dribbling from the mouth. The period of incubation in this rabbit was twenty-four days. About six weeks after the injection the animal died. Autopsy showed about the same condition as the monkey. A full grown Belgian hare was injected with the same results as the rabbit. Six other rabbits were injected with the same results. A large number of human parasites were collected from bed of a pellagrin, these bedbugs were induced to bite and abstract blood from the large vein underneath the wing of a

*Read before the Campbell-Kenton County Medical Society.

chicken, this process was repeated several times, no legions having developed.

A dog heavily infected with fleas from the home of a pellagrin was placed in a cage with a monkey and kept there associated for thirty-seven days, the monkey soon became heavily infected with fleas from the dog, but did not show any signs of pellagra up to a period of three months, same dog was placed in bed with a woman who soon became heavily infected with fleas, and soon showed signs of pellagra. Another case of pellagra in a woman who never showed any symptoms of the disease until she came in possession of a dog which showed signs of mange and salivation, this dog was heavily infected with fleas. She was in the habit of giving this dog his daily baths. Just twenty-one days after this dog came to her home she developed a typical case of pellagra, this same dog was placed in a cage with rabbits, chickens and monkey for two months, no symptoms of pellagra developed in the monkey, neither in the rabbits or chickens, the dog soon died, no evidence of pellagra could be found postmortem. Samples of cornmeal have been taken from the homes of pellagrins and injected and fed to rabbits, chickens, pigs, and monkeys neither developed any lesions resembling pellagra.

Everett S. Lain, of Oklahoma, stated that in his study of five thousand Indians he failed to find a single case of pellagra, while they subsisted principally on spoiled corn.

Dr. B. W. Page, of Lumberton, N. C., states that he has for the last two and a half years made a careful study of intestinal bacteria associated with pellagra and in addition to the colon group of bacteria which are found in feces of pellagrins, a bacillus, which must be the cause of the disease. This bacillus is from four to ten microns in length and is more sharpened at the ends than others of the colon group. When the cell membrane bursts and the young bacillus merges through the opening. On first appearance the young bacillus is very active and for a few seconds it is spiral or corkscrew shaped. It gradually elongates and becomes less motile. Later it may appear rod-shaped, slightly curved. In man, pellagra has been induced by accidental transference of cultures of the bacillus. Pharyngitis and bronchitis developed within three days, were soon followed by definite intestinal and nervous symptoms of pellagra, the microscope revealed the organism in four weeks. Pellagra being principally a European disease and coming to our shores, first making its appearance on the coast of the Carolinas, and later invading new territory in the interior. There are said to be about fifty species of fleas in the United States and to my mind they should be

looked upon with grave suspicion with reference to the spread and transmission of Pellagra.

SUBJECTIVE SYMPTOMS—MOUTH

Pellagrous patients usually complain of a burning sensation in the mouth as if scalded from drinking very hot coffee or tea. This may only last a few weeks or it may be continuous for months or even years.

Sometimes actual pain which may be increased by eating particularly coarse foods or anything hot or cold. Acid also increases burning. The tongue is frequently sore and the gums may be tender, spongy and bleed easily. Salty taste in mouth, violent choking in the throat and claw at throat with hands. Salivation is frequent and at times profuse, and at times pytalism and stomatitis may be so pronounced as to very closely resemble mercurial pytalism.

GASTRO-INTESTINAL.

Vomiting in severe cases but not a frequent symptom. In the early cases a sense of fullness or pressure over the epigastrium, which may be associated with eating is often complained of. Later burning pain over the epigastrium and sometimes over other parts of abdomen appears as the most disagreeable persistent symptom, colicky pains apparently referable to other organs may occur. Pellagrins have been operated on for suspected appendicitis and gall stones. When exploration revealed nothing more than a pyloric or duodenal ulcer. Diarrhoea is the rule in pellagra. It varies from looseness of bowels two or three stools per day to twenty or thirty bowel movements in twenty-four hours. In some cases the diarrhoea is of a dysenteric character, stools containing blood and mucus, and preceded by griping pains. In some cases there is a profuse liquid diarrhoea that weakens a patient very rapidly and frequently it proceeds death. Constipation is sometimes present in the early part of the disease.

RECTUM.

The burning pain in the rectum is almost constant and distressing symptom.

THE MOUTH.

The appearance of the tongue, in early stages may be coated and fissured with very red edges. Later the coating is thrown off leaving the tongue very red and smooth, though in some cases it is fissured resembling raw beef. There may be ulceration on the edges and underneath the tongue. The lips are very much reddened. The gums are reddened, in some cases ulcerated somewhat like in mercurial stomatitis.

ABDOMEN.

There may be gaseous distension of the abdomen and tenderness over the epigastrium in some cases over the entire abdomen, but when the diarrhoea is severe the abdomen may be flattened.

RECTUM.

Examination of the rectum reveals the fiery red color as seen in the mouth and often extensive ulceration of the rectum with fissures of ano.

Examination of stomach contents after Ewald's test meal will show at least 3-4 cases a deficiency or absence of free hydrochloric acid, dilatation of stomach, mucus is present in the majority of cases.

Mental symptoms follow eruption, such as hallucinations, double visions, melancholy, forgetfulness, insomnia is frequent, inability to think clearly, irritability in early stages, mental depression later, headache and vertigo may also be present, general weakness, all mental symptoms grow worse regardless of treatment, death in some cases is preceded by convulsions lasting several days. Muscular pains which effect certain groups of muscles or may be in general. The patients often complain of fatigue from slightest exertion even in the beginning of the attack and later, there is loss of flesh in all pronounced cases.

ERUPTION.

In some cases the dermatitis was given as the introductory symptoms, close questioning will bring out the fact that most of the cases had felt distinctly below par for several months before its exhibition, although unable precisely to define their symptoms, we are safe to say that the dermatitis, makes its appearance about the sixth month. Looks very much like sun burn, is found on both hands or feet and in some cases found on both hands and feet and is symmetrical, extending some distance on one arm as other or lower limbs as case may be and is found on the face and neck, does not yield to treatment, but to the contrary is aggravated. Exposure to sun will often bring out the eruption and increase the severity of the symptoms in pellagrins. On children the eruption is usually found on the feet, very seldom found on the hands. Nearly all mild cases are among men and women who are engaged in occupations that do not require them to be exposed to the sun. For this reason few cases have been reported from the cities, their inhabitants are not so much exposed to the sun as in the rural districts of the south. Desquamation about one month after eruption makes its appearance.

I am in receipt of a letter from Dr. O. P. Nuckols, of Pineville, who states personally, "I look upon the disease as a soil infection

and if not directly caused by hookworm, it is very closely associated with it in history and location." Also in a letter from Dr. I. A. Shirley, of Winchester, who says, "You know how much the cursed hookworm with its causation and as it is the direct and indirect cause of so many known and unknown diseases I think it well to say causation of pellagra, hookworms." Treatment should begin early, urotropin given in ten grain doses three times a day; Salvarsan, all cases improve and it should be given. All cases improve by the hookworm treatment, five grains of thymol at night until eight doses have been taken followed by magnesium sulphate. Fowler's solution of arsenic is given with good results.

Dr. B. W. Page, of Lumberton, claims that a one per cent. solution of ichthyol has a most decided effect upon the bacillus in culture, and should be given in one or two five-grain pills three or four times a day for three weeks, and seems to cure the average case. In last stage of disease the iron preparation is given. Daily colonic irrigation of one-half gallon of normal salt solution, also vaginal douches for women.

PROGNOSIS.

The mortality rates as usually published by the United States, range from 30 to 65 per cent, but these statistics are derived largely from insane hospital reports in the registration area where only the severe forms, or those in the last stages of the disease are sent for treatment, and are not to be considered as general death rate from pellagra. From the best information I could find I would say the mortality rate of pellagra is ten per cent.

Roentgen-Ray Epithelioma.—Robert Abbe, New York (Journal A. M. A., July 17, 1915), says that during the two years since he first called up the subject at the British Medical Association, he has been more deeply impressed with the importance of radium in the cure of Roentgen-ray cancer, as he has treated more cases. Logically, it is clear that if the senile garatoses of the face and hands can be cured by radium, then the early Roentgen-ray growths of the same type ought to do equally well. It is only in the advanced stage of the skin cancer from the rays that radium is not beneficial. His first case so treated was in 1903, and one application of radium cured the epithelioma. Three years ago he relieved a very bad case, though the patient was too saturated with the cancerous growth to survive more than a few months. Other examples are given. The great advantage in the radium treatment, as experienced by a physician thus treated and who had used the method himself extensively, is that it can be applied in many situations not accessible to freezing, and, secondarily, its relative freedom from pain.

POPULAR ERRORS AND SUPERSTITIONS IN MEDICINE.*

By W. W. ANDERSON, Newport.

I esteem it a great privilege indeed to appear before you. I was once a school teacher myself and would be teaching now had I not discovered the poor house at the end of the road. I love to teach

"For what delights can equal those

That stirs the spirit's inner deeps

When one that loves but knows not reaps

A truth from one that loves and knows."

Five very happy years I spent as a teacher. Many of my most treasured memories are associated with my school-room work as pupil and teacher. Some of the dearest friendships that have blessed my life arose in the association of the school room and the teachers' meeting.

How wonderful are the powers of association! I never see an isolated country school-house without a mingled pang of pain and pleasure; for it recalls one clinging to a yellow hillside, around which grew no sumacs or blackberry vines but the soil excelled in the production of red elm switches, the virtues of which were often tried on me in a disciplinary way, and thus was I taught early in life how quickly pleasure may be followed by pain.

How wonderful are the powers of association! When the September school bells ring my heart leaps as the fire horse at the gong and I want to go before the merry troops of children back to school. But I do not go. Instead I sit and muse as they go by and presently I take as it were upon my knee the little fellow that I used to be and enter into his life with a sympathy that understands. I find an odd fellowship in his limitations, for we never wholly outgrow them, and I try to learn from him the art of living contentedly within them or of being happy in spite of them. I feel sorry for his troubles and smile at his misbeliefs and gently chide him for his fears. For he can not help them. He was born as are we all in bondage to ignorance and to fear.

Man enters the world wailing and leaves it with a groan and punctuates the journey from the cradle to the grave with many a start of terror, many a cry of distress.

Coeval with life itself is the love of life, and coexistent with the love of life is the fear of death or damage. Fear is nature's guardian of life, inborn or acquired, that adds wings to our feet to carry us out of danger. The newly hatched chick from an incubator with no mother hen to teach it will squat in the grass and hide if you throw your hat in

the air over it because it has the race old fear of birds of prey inherited from countless generations of its ancestors. Many children and some grown people have an instinctive fear of furs just as a horse bred of a long line of his species that never saw a bear will run away at the sight or even the smell of one. It is the world old fear of the wild animal.

We were all afraid in the dark as children and some of us have never outgrown it. Most of us know that there are only four varieties of poisonous snake in the United States and not one of these has existed in this region for generations. Yet there is not one of us but would recoil at the sudden sight of the most harmless of the species.

Instinctive fear is our protector. But fear is the handmaiden of untutored nature, the inefficient guardian of the ignorant. "The wicked fleeeth when none pursue," and not the wicked alone. The ignorant flee with them.

We are born with the love of life and the dread of death, steeped in ignorance and encompassed with fear, searching for the truth and falling into error, reaching out for the lamp of knowledge and grasping the smoking torch of superstition.

Since medicine is a very deep and intricate science whose most ardent students readily admit their very large measure of ignorance in it, the conclusion is safe that the medical ignorance of the laity and especially of the unlettered classes is broad, comprehensive and profound.

The universal passion of all life is the love of life and its necessary concomitant is the instinct of self preservation. Next to this the master passion is the love of species or the reproductive instinct. With both of these medicine has to deal. The thought of God or the religious instinct is nearly universal in the human family. The love of knowledge and the learning instinct comes next and is followed by the love of justice and order or the legal instinct. Hence for the universality of his touch with mankind the doctor comes first and second and is followed in order by the minister, the teacher and the lawyer.

Every deep passion of the human heart develops in the human mind some working basis or plan for its gratification. The instinct of worship, lacking true guidance, builds for itself idols. The master passion of self preservation, scourged by the fear of death and steeped in the ignorance which is the unlettered layman's lot, builds for itself fancied strongholds of error and puts its vain trust in an armor of superstition. In medicine we are all subject to error in varying degrees but superstition in medicine or elsewhere is the tribute which ignorance pays to fear.

Are you superstitious? "No," you say,

*Address before the Women Teachers' Club, Newport.

"but I don't believe in taking chances with thirteen at table." "No, I'm not superstitious, but I always feel beter to discover the new moon over the right shoulder." No, teachers are not superstitious, but even you on breaking a mirror would leave the scene of the disaster and seek some place for reflection. And I, admitting that I am distressingly healthly had better knock on wood.

Many of the errors and superstitions of medicine will be found to group themselves about erroneous notions of the nature and origin of disease. The earliest conception of disease attributed it to malign spiritual influences. In that age in which epidemic disease swept over the face of the earth like a devastating frost and human life withered before it like the flies it is not strange that an ignorant and terrified people should attribute its torment to supernatural causes. We are reasonably certain now that the army of Sennacherib succumbed to bubonic plague but at the time the disaster was ascribed to spiritual forces, benign or malign according to whether viewed from the Hebrew or Assyrian standpoint.

The epileptic and the insane were possessed of devils, the leper was an outcast and if cured by any means must show himself to the priest for acceptance. Naturally if disease is due to spiritual forces the office of physician and of priest must be combined, and so it was in the infancy of the race. The exercise of the healing art consisted chiefly in the exorcising of evil spirits and the ministry of healing was the work of the cure of souls.

In time the spiritual theory was succeeded by the humoral theory. According to this disease arose within the body itself by some mysterious perversion of its own functions; a doctrine of physical total depravity, if you please, fairly comparable to the theological dogma of total depravity, and it arose about the same time also. It was believed that the various fluids or humors of the body might become perverted spontaneously thus causing disease. Sickness was accordingly due to an evil humor that flowed about in the blood or otherwise causing fever and distress.

With the advance of knowledge the spiritual humor and the humoral gave way to the scientific or present day notion. The supernatural was displaced by the natural and the internal was abandoned in favor of the external. Disease is not due to the gods or the devils. Nor does it come of evil tendencies of the body itself. Indeed we know that so far from poisoning itself the body has and uses the most elaborate system of defense against disease which is something introduced into the body from without.

Most diseases are due to microscopic forms of life. As these little organisms are discov-

ered one by one and their connection with various diseases proven, less and less is left to theory, to the imagination, to superstition and to error. But some people born in the twentieth century will persist in thinking in the terms of the twelfth. Superstition dies hard. Of such people come the stories of witchcraft, devil babies and divine wrath manifested in sickness, etc. I can show you people who are prepared to prove that cutting the babies nails will make a thief of him, that stepping over a child will stunt its growth, that moving into a new house when ill will lead to early death or that a chicken looking into the sickroom is a herald for the undertaker.

There is often a small basis of truth in a superstition upon which is reared a great superstructure of error. Among such mistakes is the popular notion that it is safe for the patient to eat anything that he particularly craves. Experiments on dogs have shown wherein lies the small truth in this large error. A healthy dog is provided with an opening or fistula into the stomach or intestine through which the digestive secretions can be collected. Then the dog is allowed to see or smell bread when hungry. Immediately the flow of digestive juices begins in anticipation of the expected meal. These juices are collected for analysis. Similar tests are made with lean meat and with fat. The three specimens of digestive juices are analyzed and found to differ somewhat in that each is particularly rich in those ingredients which will digest starch, albumen or fat with which the animal was tempted. It is probable that the human alimentary tract also pours forth digestive agents at the call of a craving desire and to a certain extent is capable of digesting the food craved. But this does not justify feeding in appendicitis for it is not indigestion we fear so much as peristalsis.

The howling dog is a popular death omen and it ought to be, of the death of the dog. But the faithful and sensitive friend of man does notice the air of anxiety and foreboding in the home of the sick and is apt to express his share of the feeling though he knows not the cause or the prospect.

Many people believe that one can be frightened into a contagious disease. Such a disease is caused by a specific germ, and fear could not produce germs. We may be and often are exposed to contagion and inhale and swallow the infective germs and still escape the disease because our body cells are able to resist the germs. Fear lowers our vitality and lessens our resistance thereby increasing our liability to infection.

When a baby dies some one is sure to say that its mother loved it too much and so God took it away. A beloved wife is lost and they

say her husband idolized her and God is a jealous God. Some people serve such a little God that they ought to write his name with a small g. What a travesty is such a superstition on the Divine love! As if it were possible for us poor finite mortals to love too much! Did not the Christ say, "A new commandment I give unto you; that ye love one another. As I have loved you, that ye also love one another."?"

Again we are told that the child was too bright to live. On the average bright children are of better physique and live longer than others. Occasionally a delicate child is precocious just as a plant suffering with disease or drought will rush into an early and imperfect maturity before it dies. This is struggle of nature to save the species and represents shortcomings rather than unusual perfection.

The birthmark is an ever recurring occasion for superstition that will not down. Perhaps its persistence is due to the mole hill of truth beneath the mountain of error. Some years ago I made personal investigation of fifty cases of alleged birth mark all supposedly due to prenatal influences. Only one of these bore even the semblance of truth. Doctors have little belief in babies being marked except C. O. D.

The common dream of falling and the only less one of flying are said by some to be a premonitory warning that we are about to leave this world. When understood the mechanism of such dreams is very simple. We lie in one position long enough to numb the nerve ends that are pressed upon and they no longer transmit to the brain the sense of contact with the bed. The subconscious mind receiving no impression of support reasons that there is none. Hence we are falling or flying according to whether we are the more fearful or adventurous. As we struggle to save or balance ourselves in the air we stir in our sleep and so bring new and unwearied nerves in touch with the bed and thus alight very softly.

When you sneeze the German exclaims "Gesundheit." the Irishman, "God bless ye," and the Spaniard crosses himself, for you must know that evil spirits working bodily harm are present when you sneeze. Only less noteworthy as occasions of occult influence for evil or good are the acts of yawning or stretching. All three are reflex acts due in the first instance to irritation of the lining of the nose and in the others to sluggish circulation. Each indicates a power of reaction against irritation or other untoward condition of the body. A person may be too ill, his nerves too obtunded by disease, to react against these conditions. During severe illness the patient will not sneeze or yawn or

stretch. When he has so far recovered that his nerves have regained their power of reaction he will do all three.

The ninth day is popularly accorded the most serious importance in disease. There is no real reason for this. The custom of keeping the mother and new born babe under observation for nine days is probably the chief source of this notion. The ninth day is safer on the average than any preceding one.

The success of the various charms for removing warts is due to the fact that most warts disappear spontaneously in time.

Most medical errors and superstitions are harmful by increasing fear and by delaying or hindering proper treatment. For instance the foolish belief that the bite of a healthy dog will cause hydrophobia if the dog in later years develops the disease. This leads to killing the dog at once without trying to determine whether he is already rabid and if so to institute proper treatment for his victim. The latter goes on fearing the disease for months and in doubt needlessly. By tying up the animal, a few days or hours would prove his state of health. Many so-called mad dogs are not rabid. Only about one-half of all persons bitten by rabid animals on the bare flesh develop rabies, and only one fifth of those bitten through clothing. These facts account for the alleged mad stone cures for there is absolutely no virtue in the stone and dependence upon it in cases really infected is highly dangerous.

Among the very harmful misbeliefs now happily disappearing is the fear of antitoxin for diphtheria. When antitoxin was first introduced it was met with healthy scepticism by physicians. It is wise to take up a new and powerful remedy with caution. But the day of doubt is long past. We now know that no case of diphtheria recovers without antitoxin. You say you know of recoveries without it? You are mistaken. Let me explain. You know that such diseases as smallpox, chicken pox, scarlet fever, measles and diphtheria are self limited. That is they run about a certain length of time and get well of themselves or the patient dies. He does not remain ill with the disease beyond a limited period. By what means is a disease self-limited? This is the way. The germ of such diseases produce poisons which cause the symptoms of the disease. The cells of the body immediately begin to make an antidote for this poison. Thus the toxins of the germ are combated by the antitoxins of the body cells. In every case in which the body cells are able to make sufficient antitoxin in time the patient recovers and the germs are rendered harmless. As long as that curative antitoxin remains in the body in considerable quantity that person will not catch the same

sickness. The body antidote for smallpox, chicken-pox and measles usually lasts for life. In diphtheria the immunity is short for the antidote disappears from the blood in a few weeks. Now the antitoxin we inject for the cure of diphtheria is the same antidote that the human body makes for its own cure except that we get our remedy from the blood of a horse that has recovered from diphtheria poisoning. While the child ill with diphtheria is slowly and perhaps inefficiently making his own antitoxin we cure him by adding to his supply from that stored up by the recovered horse. If the patient's antitoxin is too slow in forming and ours is given too late the case is lost. The heart paralysis so much feared is due to the toxin of the disease and never to the antitoxin and was a very common method of death before antitoxin was discovered.

A most serious superstition is the one which suggests getting rid of a contagion by transmitting it to another. This is of course impossible for contagion, like love, does not grow less by giving it to some one else. It is doubly unfortunate that this pernicious fallacy prevails most with reference to the more secret and loathsome diseases.

Most of these superstitions betray the belief in the spiritual origin of disease. Out of this type of misbelief grow the various charms supposed to favorably influence the course of sickness. Tuberculous glands in the neck or scrofula was called king's evil for the royal touch was supposed to heal it. A silk thread about the neck to prevent or cure sore throat, a buckeye or small potato carried in the pocket for rheumatism and going out of the sick room by the door of entrance to escape taking the disease with you all portray the faith in charms to outwit the evil spirits. The "Heathen Chinee" burns his colored papers, the Indian medicine man beats his tomtoms and the negro voodoo doctor recites his incantations for the same purpose and to the same effect.

Failing to trick the evil spirits out of the case resort is had to disgusting remedies to drive the imps of disease away.

"I pray thee let me and my fellow have

A hair of the dog that bit us last night." said Heywood in the sixteenth century, and it is still repeated in the twentieth. Poultices of excrement or a crushed toad or lizard are still applied. For a long and serious illness a tea made from the husks of straw of the patient's bed is recommended. Garlic and asafoetida are enough to disgust evil spirits and they can not be useful otherwise as preventives. All manner of fats, bear grease, rabbit, skunk and snake oil and even human fat are used internally, externally and eternally by the superstitious and the druggist who

caters to such trade gets them all out of the same jar.

The spiritual theory of disease is most strongly exemplified in the present day by the various religio-medical cults such as New Thought or Mind Cure, Divine Healing or Faith Cure and Christian Science. All of these are based on one underlying central truth far older in human ken than either of these systems of healing. This important truth is the value of the hopeful and determined attitude of mind as a means of healing. But knowing this truth the doctor has too often neglected it and failed to marshal the valiant forces of the mind to battle for the life of the body. Out of his failure have grown the various methods of mind cure and spiritual healing, each a mole hill of truth magnified into a mountain of error.

A soldier was so desperately wounded that the ambulance corps passed him by as not worth trying to save. He was roused from a stupor by the chaplain and told that his end was near. He indicated a desire for something in his pocket. The chaplain procured it for him. It was only a ten dollar bill. Asking what he should do with it the answer came feebly, "I bet ye that I don't die," and he didn't. Every physician has seen cases that might have died by only giving up.

Christian Science asserts that mind is all and that matter does not exist except as a delusion of mortal mind. We have no body. Hence the body can not be sick or suffer or die. It will be seen that Christian Science is just living on a heroic scale. But it has in it the principle of belief in recovery and the accentuation of hope, for the purpose of the heroic lie persistently reiterated by the healer and by the patient is to hypnotize the latter into the attitude of expectation of cure, and this hopeful state of mind does promote recovery.

The mind curist admits the fact of disease and its danger, but he asserts the power of the mind over the body sick or well. He determines to live, to get well, to become strong and no doubt such an attitude of mind helps to restore health.

The faith curist, too, admits the reality and the power of illness and of injury. But he ascribes these evils to the Evil One and asserts that God overcomes Satan. You are sick, very sick. Satan is mighty and is trying to destroy you. But God is almighty. He is on your side and you are sure to win. It is plain that this spirit of hopefulness is a valuable aid to recovery.

Let us bear in mind that not one of these healing cults has a patent on its process of benefiting mankind, that the process is not patentable for it was in general use long before they took it up. It is not only our privi-

lege but our duty in sickness or in health to be hopeful, to be confident, to set our wills to the achievement of the desired good. We need not be fanatics or faddists to do this. We need only to put proper emphasis on a neglected truth.

The humoral theory still has its votaries. I have had people in perfect health come to inquire for blood purifiers. Many persons make a habit of taking "spring medicines." Patent medicine vendors take large advantage of these erroneous notions to foist their wares upon the public.

Vaccination is a favorite subject of misbelief. Adherents to the humoral theory of disease demand that vaccination so purify the blood as to make one immune to all disease. Of course it is only claimed for vaccination that it prevents smallpox and that it is almost as perfect a preventive as having the disease itself. About two per cent. of people will, on exposure, take smallpox a second time. Nearly ninety per cent. of our population is vaccinated and yet ninety-eight per cent. of our smallpox cases are among the ten per cent of our unvaccinated people, and the remaining two per cent are the mildest cases we see. In an epidemic of ninety-six cases in this county only one could show a vaccination scar and that scar was fifty-seven years old and that case was the mildest of them all. The rare cases of lock-jaw or blood poisoning after vaccination are due to accidental infection of the wound with these germs just as the same thing occurs sometimes from a pin scratch or other minor abrasion.

The mildness of smallpox of recent years is due to an inherited immunity from vaccinated ancestors. Whenever vaccination is neglected for a few generations the disease becomes virulent as in Montreal where 3,164 died in a year out of twelve thousand cases, a mortality of over twenty-five per cent.

The premier delusion of all the errors of medicine is the alcohol fallacy. Time forbids a full discussion of this subject. Suffice it to say that modern research definitely proves that alcohol and the various alcoholic beverages are in no sense foods or even stimulants. Alcohol is always a narcotic like opium, cocaine, chloral, chloroform, etc., and has similar uses and limitations. Taken in the proportion of very moderate drinking it diminishes working capacity and producing power ten per cent. and increases liability to accident nearly twenty per cent. It lowers resistance to heat, cold, fatigue and disease and gives the moderate drinker three chances of death against two of the total abstainer. These are facts accessible to all physicians and teachers and it is our business to know and teach the truth.

We began with the fear of death. Let us

return to it in closing. Happily this is a diminishing fear. We will not sing in this day with Byron,

"Oh God! it is a fearful thing
To see the human soul take wing."

Nor will we say of death with Halleck,

The groan, the knell, the pall, the bier,
And all we know or dream or fear
Of agony are thine."

The fear of death is greatly mitigated in recent years by the kindlier conception of religion. The thought of God as an ever-wakeful vengeance waiting the moment of dissolution to thrust the sinner into outer darkness and torment no longer harasses the dying. Uninfluenced by harsh teaching the approach of death is not dreadful or even unkindly. The progressive deterioration of the bodily forces, the slow diminution of the powers of perception, of thought, of feeling and of action, the constantly narrowing sphere of interests; the gradual loosening of the grip on life; the increasing weakness and weariness; the augmenting heaviness and torpor; the adding pain and the multiplying discomfort, and then the resignation of the dying man no longer troubled by "the evils that we know not of," and the submission of his case, willingly, sins and all, to the Great Physician who knows and understands. Even the most fearful of us may learn to murmur,

"Come, O Death, so silent flying
That unheard thy coming be,
Lest the sweet delight of dying
Bring back Life again to me."

Leprosy or Syringomyelia?—G. B. Hassin, G. Burke and John Nuzum, Chicago (Journal A. M. A., July 17, 1915), give an account of a Norwegian woman, age 62, who had suffered for fifty-four years from tropic disorders resulting in a total loss of fingers, toes and feet, and which were preceded by felon and ulcer formation. In addition she shows an upper facial paralysis, pronounced symmetrical anesthesia, involving all four extremities, the forehead, and partly the chest. There are also atrophies of the small muscles of the hands, muscular twitching, electric anomalies, spasticitis, urinary disorders, and the reflexes are absent. As regards diagnosis, the points in favor of leprosy as against Morvan's disease, the distribution of the anesthesia which is different and unlike the symptoms of Morvan's disease, but similar to those of old leprosy, the facial paralysis, the absence of scars on the stumps of the hands and the peculiar appearance of the bones as shown by roentgenoscopy—atrophy instead of hypertrophy.

RELAXATION OF MUSCLES IN THE TREATMENT OF FRACTURES.*

By A. J. GRAHAM, Chicago.

A fracture being a typical injury it necessarily calls for special methods of healing. The modern methods of permanent extention date back to the eleventh century. Upon the introduction of plaster of Paris the fracture

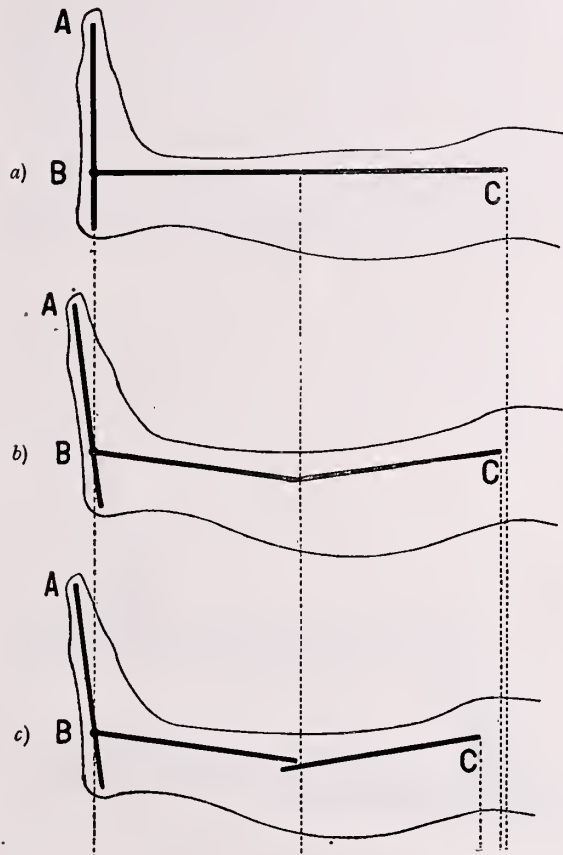


FIG. 1. Recurvation From Neglecting Treatment. Foot Should Be at Right Angles With Leg.

was looked upon merely as an inconvenience for a short time. Some noticed that plaster of Paris was not entirely satisfactory leaving the affected part, or joint, in a somewhat paralyzed position, giving rise to shortening and stiffness of the neighboring joint.

Upon the advent of the radiograph the profession was astonished to find the enormity of improper union, and the faults of a plaster of Paris bandage were found to be that sometimes it became too tight or too loose, was too long or too short, caused pressure here and there, and often caused immobilization of the joints.

The extention treatment introduced by Baudenhauer for all extremity fractures is

considered indispensable. Later the methods of ivory pegs and nails with massage and

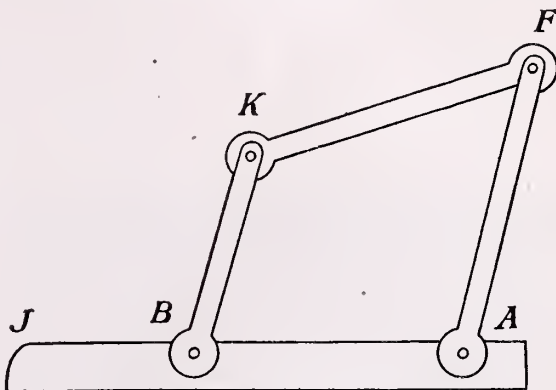


FIG. 2. Scheme of Zuppinger's Thigh Splint.

mobilization aided to prevent atrophy of muscles and stiffness of joint.

Tension.—The peculiarities of elasticity lie in the strength of molecules—either pushed together or separated. As soon as the working force stops the molecules return to their original form. If the limits of elasticity are reached in fragile bodies, as glass, steel, and bone, we find a separation along a fracture plane. If we exceed the elasticity in muscle tension we have a fracture. So pressure alone does not cause fracture, but it may also be due to tension. We may have, therefore, tearing, bending, or torsion fractures, according to the way the force is applied.

A study of the force which causes any injury will often give profitable information in treating it. How far the patient fell; in what position he was when he struck; and upon

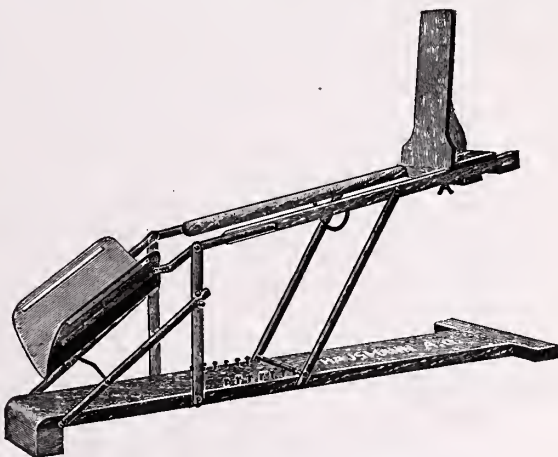


FIG. 3. Zuppinger's Thigh Splint.

what he fell are all important; also the direction from which a missile came, and with what force it struck the patient. This particularly applies to head injuries, fractures and crushing injuries of the extremities and internal injuries.

Different Forms of Dislocations.—Lateral,

*From the *Illinois Medical Journal*, June 15, 1915.

longitudinal, angular, and combination. If the fracture is complete with broad bones, shortening results. If rotation of fragments occurs, the dislocation is termed peripheral. In a fracture of clean, long bones with lateral dislocation, shortening must inevitably result.

Dislocations are primary, if due to trauma, such as those produced by over-riding in im-



FIG. 4. Zippinger's Automatic Extension Apparatus for Fracture of Shaft of Femur.

paction, and angular ones, produced by bending, twisting or torsion. In secondary dislocation the musculature is responsible for the displacement. If at the point of fracture, the fragments do not brace against each other, the muscle tension will result in over-riding. By far the most important effect of the muscle on the fracture is the secondary dislocation. It is noticeable as soon as the deformity. It is the most important hindrance to straightening out the dislocation, as shown in the adduction of upper humerus fragments or femur fragments, flexion of upper fragments of radius, and in the over-riding and shortening of all oblique fractures.

There is another type of dislocation which might be called tertiary, or that which arises through neglected treatment, as failing to put the foot at right angles with the leg in fractures of the leg. See Fig. 1.

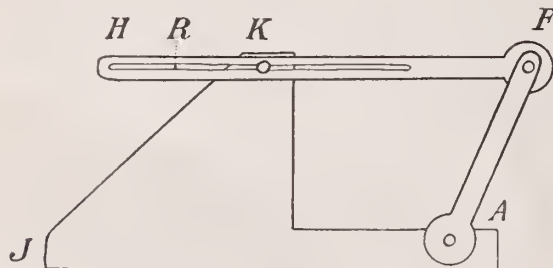


FIG. 5. Scheme of Zippinger's Leg Splint.

The cause of all cases is prolonged muscle tension, or sudden stimulation of the muscle.

The location of these fragments becomes easy as the delicacy of palpation improves upon examination. The enormity of the dislocation is shown by the X-ray.

Physiology of Muscle.—If, under physiological conditions, a muscle wants to shorten itself, it can not contract without doing mechanical work. According to its position and that of the joints over which the muscle draws is its work varied. The strength of the muscle is compared with the work it must do and the shortening to be obtained to do it. The working possibilities exerted by the muscles in a fracture of the humerus is enormous for a short time.

All muscles on a live limb, at least during working hours, are under a certain tonus, i.e., finding themselves in an elastic condition, they would have to contract, if their points of attachments were not fixed points.

Contraction, Stimulation, Shortening, Tension.—A muscle is either active or inactive. That does not mean that a relaxed muscle is inactive, or an active one stretched. The condition of tension depends upon outside conditions, e. g., the inactive muscle weighted down

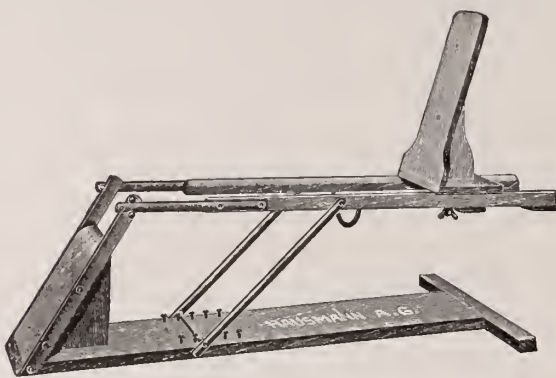


FIG. 6. Zippinger's Leg Splint.

becomes stretched. On the other hand an unweighted muscle being stimulated contracts, but remains relaxed.

A muscle is an elastic body, but not in the sense of the elastic bodies of physics. Muscle is also capable of stimulation, thereby differing from inorganic bodies. If we take a wire and attach a weight of 1 Kg., in order to stretch it 1 mm., we can stretch it two mm. by attaching a weight of 2 Kg., 3 mm., 3 Kg., etc., which is Hook's law, or, "In an inorganic elastic body the size of its deformation is proportional to the energy expended," which is called the coefficient of elasticity. But Hook's law cannot be applied to muscle because Weber has demonstrated that a relaxed muscle by increasing the weight becomes less stretchable. The necessary weight for the elastic stretching of muscle is proportional to the square of the distance of the at-

tempted stretching, or 1 Cm. needs 1 Kg.; 2 Cm., 4 Kg., and 3 Cm., 9 Kg.—Weber's Law.

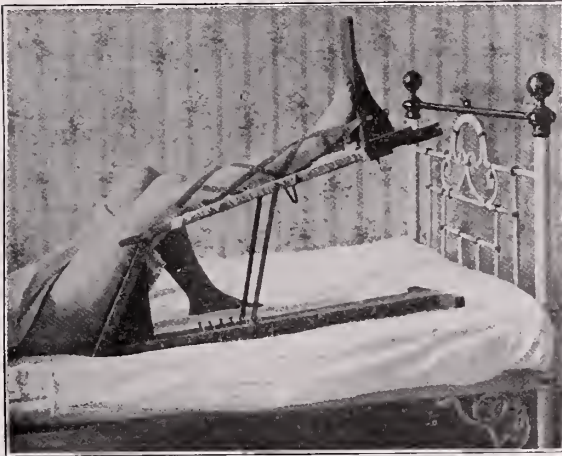


FIG. 7. Zuppinger's Automatic Extension Apparatus for Fracture of Leg.

In connection with this there are two facts:

1. If an unweighted and freely movable muscle is stimulated it contracts, but remains relaxed.

2. If a muscle attached between two fixed points is stimulated, it stretches but does not contract on stimulation.

According to our first law it is a positive fact that stimulation of muscle does decrease its original dimensions.

On the contrary, what happens through the stimulation with the coefficient of elasticity is not explainable in a few words. Under certain conditions it remains constant, while under others, it seems to be increasing with the increasing stimulation to such an extent as to have a paradoxical muscle twitching.

So we do not follow Hook's law,

$$\frac{\text{Lengthening}}{\text{Weight}} \text{ as to the coefficient of elasticity of muscle, but Weber's law.}$$

$$\frac{\text{Lengthening}_2}{\text{Weight}} = \frac{1 \text{ Cm.}_2}{1 \text{ Kg.}}$$

The effect of weighting and stimulation on the living cannot be compared with that of a prepared muscle. On a live muscle weighting has the same influence as stimulation. Because this weighting comes to act independent of the will, it can be called a reflex stimulation. The will cannot counteract this stimulation.

Stimulation Through Fracture.—A fracture acts on the musculature as a stimulus. We use the expression that muscle tonus is increased, or that the fracture gives a pathological hypertonus. From this we have two facts:

1. The fact that the present fracture means a stimulation to the involved musculature, or a chronic muscle spasm.

2. The same fact that works in that manner that all other stimuli, especially weighing, causes a higher stimulation than exists under normal conditions.

It is necessary to remember that attention must be paid to the fact that a fracture does not consist alone of a broken or more or less displaced bone, but is accompanied by extravasation of blood. Besides the danger of infection, draining these hematomas is said to have a bad effect upon the process of repair for the presence of these extravasates expedites the building of callus. One disadvantage, however is the resulting blood and lymph stasis which they cause.

Shortening of Muscle.—The lack of nutrition due to blood and lymph stasis may cause shortening of muscle. Aside from the separation of the continuity of bone, and the destruction of the physiological firmness, the most important element in the pathology is the destruction of the physiological equilibrium of the musculature. Take a joint of the healthy limb not encumbered by external weight, the physiological tonus of each muscle would lead to the corresponding joint motion, if also the antagonist were not under the same tonus. The tonus of the different muscles in connection with the balance of the elastic peculiarities is so divided that in a healthy limb the least change in the position of the joint causes a muscle tension. This is the sleeping position, or for the majority of joints of the extremities the position of semi-flexion. An individual with healthy muscles and nerves unconsciously brings his joints into that position in which the entire muscle tension is least. Difference in position in sleeping is explainable on the ground that in many joints the limits of area of least tension is very great.

Disturbances of bone firmness means, therefore, a disturbance of muscle equilibrium. If a bone is broken, the muscle follows its tonus in that it shortens and displaces those bone fragments to which its tendons are fastened.

In the first hour after trauma we have a so-called muscle stupor, whereby the tonus is probably diminished. Even if it is unchanged, we have the fact that shortening of muscle causes decrease in tension. The muscle equilibrium is destroyed in people with cramps in the early morning. Here the continued relaxation has so heightened the irritability of muscle, that a slight stimulus brings forth the condition of cramp by reflex action. So the trauma of some fractures acting as a stimulus to reflex action causes such cramps that narcotics are necessary.

Therapy.—Muscle tension is the cause of most deformity. In order not to have muscle

tension, you have to remove irritability from the affected part. After a few hours we have compensatory shortening, which increases up to the third day. The result thereof is to prevent antagonistic movements; that is, if a muscle is an extensor, complete flexion is impossible; if a supinator it cannot entirely pronate. It is injurious to let the muscles go till swelling has subsided for it increases the possibility of cramp, and also the so-called nutritive or compensatory shortening.

The weighting must not be unsteady, nor rapidly increased or decreased. A shortening should never be corrected by a sudden jerk, nor by a backward or forward movement, for by such a maneuver the muscle becomes highly stimulated, so that its tension is increased, and you lose the extension already obtained.

Muscle Tension.—Inactivity of muscle. It is unfavorable to have the muscle inactive because it results in atrophy. Nevertheless it is not as destructive as compensatory shortening, nor the degenerative shortening due to overloading. Whereas inactivity, which lasts only a few weeks, leaves behind no irreparable atrophy, inactivity for months also leaves no permanent results, if only the mechanical conditions for the restoration are produced.

As soon as the callus has the required compactness, it is advisable to have small active movements. By movements right from the beginning atrophy is prevented.

Rest and Semiflexion.—Nature has given us a condition in which the entire tension of all muscles must be least, viz.: sleep. It is often necessary to have a small deviation of a joint from its extreme position in order to avoid the feeling of extreme tension. The least combined tension of muscle is where the involved joint is in the center of gravity. We designate such a mid-point as semiflexion. Therefore, it gives us a remedy to reduce to a minimum the tension of the entire musculature passing over a bone.

The best proof clinically is the extension treatment of the thigh fracture, which in full extension of the knee joint demands a weighting of 25-30 kilograms, while in the semiflexed position it takes only five or six kilograms, because tension is taken off.

Various Forms of Treatments.—Massage and active and passive movements are necessary and in general, the older the patient the earlier it becomes necessary to begin, in order to regain the complete function of the musculature.

Splints are satisfactory in that lateral and peripheral dislocations may be corrected directly by them. We have leverage on the leg from the foot, in fact every joint gives such leverage for the adjoining joint, if the interposing joint is not to be stretched. Semiflexion when leverage is used, is contraindicated.

The Circular Plaster Cast.—If we disregard the plaster cast altogether in various fractures of the leg, it remains for the practitioner to lose his case, it going to the hospital. Where no extension can be applied, a cast is indicated for rest. As long as the practicing physician will rely upon plaster of Paris casts alone, each clinic will be richly supplied with Roentgen material. The judgments of accident statistics do not have their basis alone in deformity, but in atrophy through inactivity of muscles and stiffness and degeneration of capsular tissues of joints due to prolonged immobilization. Another case of deception by casts is where we have a dorsal or longitudinal dislocation or an ulnar abduction in a Colles' fracture take place under the cast resulting in useless fingers from fixation of tendons.

If the cast is changed too often the callus is torn and loosened and a longer time is required for a permanent one to form. In general the rule holds that a dislocation is less easily remedied, the longer the time after the fracture, except small angular dislocations, which are best corrected about the third week, when the callus is not so friable as in the beginning.

Extension Bandage.—Permanent extension. We choose permanent extension for all those fractures which would retard the function of the limb by shortening. The old classical extension demanded the extreme position of the joint. The best example of this is seen in the thigh with the extended knee and hip joint. Even a healthy person in this position would not endure the painful feeling of tension in the flexors of the thigh. This feeling is not noticed with a broken bone, because the tension is lost in the shortening which has arisen due to this tension. With permanent extension we revive the results of muscle relaxation as under moderate weighting in a favorable position of the joint, the muscle loses its pathological hypertonus.

Counter Extension.—Counter extension is obtained by raising the foot of the bed, or in children by hanging the limb vertically. The objection to this is that the weight may swing and cause jerking. For extremities in children a woollen shawl fastened under the arm and drawn toward the head is used. If an arm, the counter pull is made with an axillary bandage. Objectionable also is the extension made against the sole of the healthy foot. The patient pulls himself up with a jerk and disturbs the fracture. Any uncomfortable position gives the best possible cause to question the success of the extension treatment.

COLLES' FRACTURE.

The muscles directly attached to the fragments in Colles' fracture are:

To the anterior surface of radius—the pronator quadratus.

To the tip of the styloid process of the ulna—the supinator longus.

An examination of the majority of Colles' fracture plates will show a silver fork deformity, i.e., adduction of the lower fragment of the radius and a rotation of the lower fragments of the radius and a rotation of the lower end of this fragment dorsally. It is not so much an abduction as a shifting of the line toward the thumb side, viz.: the bayonet deformity. The cause of these deformities must be the traction of the muscles passing over the fracture, it allowing the muscles of the radial side to contract while those of the ulnar side cannot do so. Comparing the musculature of the forearm divided in the median line some kind of an equilibrium might be maintained by the two carpi flexors and the three carpi extensors on their four corners, but upon fracture the preponderance is thrown to the radial side for the following reasons: (1) The thumb has the strongest muscles, besides making three to this side, while the ulnar side has only two digits. (2) The greater mass of the muscles of the forearm on being the radial side. (3) The supinator longus having direct attachment to the fragment.

The reason for the dorsal elevation of the carpus is that the force causing fracture was applied to the thenar and hypothenar eminences, and the extensor muscles contracted holding the carpus elevated dorsally.

The indication, then, is for adduction and flexion, or the resultant, the "pistol" position. With the hand as the lever, the point of the ulna, as the fulcrum and the musculature to the radial side as the weight, the following muscles must be relaxed: The radial group, the supinator longus, the extensor carpi radialis longior and brevior; the deep oblique group of extensors, the abductor longus pollicis and the extensor pollicis, as well as the deep straight group: the extensor longus pollicis and the extensor indicis; in fact all those extensors and flexors to the radial side.

For the flexion, with the hand as the lever, the coapted fragments as the fulcrum and the extensors as the weight, the following muscles must be relaxed: all the extensors of the digits, the extensor carpi ulnaris, and the adductor longus pollicis, which form the musculature of the middle of the dorsum of the forearm.

Placing and fixing the hand in this position will soon exhaust these muscles and either plaster of Paris or padded splints, built up, this position may be maintained.

FRACTURE OF THE SHAFT OF THE FEMUR.

In the fracture of the thigh the groups of

muscles that would act to produce dislocation of the fragments are:

(1) The anterior group—the quadriceps femoris, consisting of its four elements, tending chiefly to produce posterior bowing.

(2) The internal or adductor group—the pectineus, adductor brevis, tending to deflect fragments in the upper third; the adductor longus in the middle or lower third and the adductor magnus and gracilis in the lower third.

(3) The posterior group, the flexors. To the outer-side the biceps forcing the fragments upwards and inwards, while the semi-membranous and semi-tendinous forces them upwards and outwards. If the limb is in adduction, place it in slight abduction to exhaust the adductors.

*Zuppinger's Splint for the Fracture of the Femur.**—The counter extension is carried by a splint back of the thigh, the tuber ischii resting against it is in sitting on an edge. Imagine the pelvis a fixed point. By bandaging the leg and the knee joint, the pull is carried to the lower fragment of the femur. If all the muscles of the thigh are put on tension the lower fragment will follow our traction without any difficulty. There are some powerful muscles here and they offer considerable opposition to stretching.

Steinman placed a nail through the femur fragment and later modified it by placing it through the head of the tibia. This gives an ideal point of attachment but has the objection of possible infection of the hematoma, or injury to the joint structure, or changes due to the disturbance of joint pressure.

It is necessary to take into consideration the adductors pulling the lower fragment in. This is corrected by placing the line of extension in the abducted position. If the adductors are not acting to produce this dislocation it is foolish to call them into play by abduction.

Description of the Splint.—See Fig. 2. This shows a square with jointed corners. If you place this vertically, it will fall over towards the right, point K will move away from point J. If you connect point K with point J with an elastic element (spring or rubber tube) the top of the square will also drop on account of the weighting of the bars, BK, KF, and FA, but only so far until increasing elastic power of the bar, JK has its equilibrium. This is the main thought of Zuppinger's splint.

Now at point J, the tuber ischii comes against the splint and on the corner K, the knee lies, and at F the foot is fastened. The elastic element JK are the muscles of the upper thigh. Their tension prevents the falling

*H. Zuppinger: Knochenbrüchen.

over to the front of the apparatus and that power whereby the apparatus together with the leg strive to fall forward, expands the upper thigh musculature and thereby lifts the longitudinal dislocation.

This power can be regulated; the nearer you put A to B the greater it is. It is obvious that the hip joint as well as the knee joint are in semi-flexion.

LEG EXTENSION.

Here there are only two movable joints—H and F, while K is a button, which, together with the slit R, makes it movable. This system if put in a vertical position will immediately drop forward toward the right. But thereby the point F passes away from K until the H moves in the slit R until it strikes the button, but we do not let it come that far. We stretch an elastic element from K to F. Now if the splint goes forward towards the right and the distance K and F increases, the extension of the elastic element K and F rises and the system comes to rest when the tension of the elements of that power keeps its equilibrium which tries to enlarge the distance KF.

On the space FK the leg lies. At F the foot is fixed. The elastic elements are the muscles of the leg. Their tension holds back the forward falling of the apparatus and the power whereby the apparatus together with the leg strives to fall forward lifts the longitudinal dislocation. Here also the power can be regulated. It is larger the nearer A is moved toward the foot of K. Here, also, you see that the knee is semi-flexed. Now in connection with this, if you place the foot-board in a somewhat slanting position the ankle will go into semi-flexion also.

What is particularly to be mentioned in Zuppinger's splint is as follows: The patient lies in a more comfortable physiological position, which he will be able to keep for some time. Also, you can start movements of the knee joint by light massage, which will not affect the draft of the weights. Should the foot fall too deep, or if the end H will tighten itself by button K, you simply pull the string between the foot and the foot-board tighter and you get the original position again. The pull remains constant. That is why they call this an automatic extension apparatus.

It has been proven that semi-flexion takes from one-third to one-fifth less weight. Ten pounds is enough if the knee and hip are in semi-flexion.

VACCINE THERAPY.*

By H. J. FARBACH, Louisville.

The studies of immunity and immune forces in the past ten years have opened up a great field for both the laboratory investigator and the practical physician.

To-day even in remote country districts the laity is reading and learning of the use of new agents in the treatment of infectious diseases and the doctor is brought face to face with the question whether he wants to or not.

A man does not have to be a laboratory expert or a profound student of immunity to be able to use these new biologicals but he should have a practical knowledge of immunity, of what these substances are and of the action and results to expect from their administration.

Many theories have been given for the production and in explanation of immunity in its different forms.

Metchnikoff gave us the leucocytic or white blood cell theory and although beautiful from a theoretical standpoint it was never able of practical demonstration.

Then Ehrlich came with the famous side-chain theory which was able of some practical demonstration but it was a complicated confusing procedure.

Wright with his opsonic work cleared up some of the questions in the great study but his work was not practical.

I do not wish to seem a pessimistic critic but we must not forget that all the different explanations given so far for immunity and its forces, are still theories, that no one of them gives a thoroughly satisfactory practical explanation, and we have come to know that things that are not practical are of no more use to the practicing doctor than they would be to a railroad.

The question of serum or antitoxin immunity has become fairly familiar to us all. Diphtheria is practically the only disease in which this line of therapy has been successful. It was an alluring, beautiful picture the earlier serologist painted, if they had attained their aim all that infectious diseases and their treatment would have consisted of would have been the making of a diagnosis and then going to an ice box and selecting a proper serum, giving the patient an injection or two and collecting a good fat fee. But it was soon learned that what was true in diphtheria was not true in any other disease.

Following the disappointing results in serum therapy came the highly promising re-

*Read before the Nelson County Medical Society.

sults obtained by the so-called vaccine therapy.

Just a word here about two different types of immunity: For a long time investigators try to explain the actions and forces of immunity along the lines of toxin immunity. By toxin immunity we mean this. That a bacteria enters the body, grows, multiplies and then produces an excretion-like substance that gave rise to the symptom of disease and this substance was called toxin. This toxin, either following the presence of bacteria in the body, or on being injected into an animal organism, stimulates certain cells in the body to produce a substance that is a chemical antidote for this toxin and is called antitoxin.

A great deal of time and effort was spent in trying to prove this sequence in every infectious disease, in other words proving the disease by toxin immunity. It soon became apparent that this was impossible and that there must be some other explanation. For instance if you injected a suspension of dead streptococci into an animal, soon after such an injection a new substance would appear in the animal's blood serum that was specific for this injected streptococci but this substance was not an antibody, therefore a satisfactory antitoxin could not be prepared for streptococcic infections. What then was this substance that was produced by such infections. It was found that every kind of bacteria produced a specific one and not only bacteria but any foreign proteid would.

Several explanations along the lines of the side-chain theory were proposed and were able of a certain degree of practical demonstration but the feeling existed that these were not the proper one.

Of late two men have reported their results along certain lines that presents a new angle from which to study immune forces and to me from this work is evolving a sane, simple, practical explanation of the second type of immunity that interests us, namely bacterial immunity. In other words in some diseases as in diphtheria, the immune forces of the body overcome the disease by overcoming the action of this toxin, this is toxin immunity; in other diseases, say typhoid, the immune forces overcome the disease by destroying the bacteria themselves and not the toxin alone, this is bacterial immunity. I do not mean that in typhoid we have no toxin to combat. I mean that if our bodies directed the immune forces against the toxin only in typhoid fever no one would ever survive it because the bacteria undisturbed could and would produce toxin more rapidly than the body could make an antitoxin for it. It is that type of infecting agent. But when the immune forces attack the bacteria themselves they are able to overcome the infection.

The Vaughans of Detroit, have for some years been working with protein substances and they have given us some valuable facts among which are the following:

1. That bacteria are a protein just as egg albumin, milk, wheat flour, cheese, etc, are proteins.

2. That all protein, whether derived from the animal or vegetable kingdom, from bacteria are built up, chemically speaking, in the same manner that the keystone of every protein molecule, is a group of atoms that are poisonous in action. This poison group is identical in every protein. In other words there is the same identical poison in egg-white as there is in the diphtheria bacillus.

3. That this poison group does not exist in a free state but is surrounded by non-poisonous molecules and these secondary molecules are different in every protein and give to that protein its distinctive attributes.

4. That when a protein is taken into the body through the digestive tract the destructive protolytic action of the digestive ferments is so rapid that it disintegrates the whole protein substance so quickly that the poison group is destroyed or changed before it has an opportunity to produce any physiological action, and it is so changed by digestion that the body can use it to carry on its normal metabolism.

5. But if a foreign protein gains entrance to the tissues other than through the digestive tract, a different process follows. Here, too, the body cells try to remove this foreign substance by a process of digestion. Normally there are no digestive enzymes in the tissues that would break down this substance, but its presence stimulates the production of an enzyme-like substance that does disrupt or digest it as it were. This type of digestion, called parenteral is necessarily slow. The outer or secondary molecules, which surround the poison group of every protein, are removed more or less completely and the poison group is to that extent set free to exert its poisonous influence on the body cells.

As I said before this poison group is the same in all proteins. That obtained from milk will kill an animal in the same sized dose, in the same length of time and in the same manner as the one obtained from the streptococcus or any other bacteria.

6. Now here is an interesting and most valuable discovery. This poison group in bacteria is the one that gives rise to the symptoms of disease. It is liberated from the bacterial substance by the digestive-like action of a substance produced by the cells of the body to destroy the foreign protein, the bacterin.

This enzyme-like substance is specific for every protein. Therefore it must be concern-

ed with the secondary non-poisonous molecules of the protein because the poison group is common to all while the secondary are different in every one. Here, then, we find that the substance that produces the symptoms of disease has nothing to do with the forces of immunity. This poison group is not a toxin because it does not stimulate the production of antibodies as all toxins do.

The part of the bacteria that does stimulate the immune forces is the secondary non-poisonous molecules.

7. After the production of this enzyme-like is once started it increases in amount and activity until it reaches the state when it will destroy the bacteria faster than they can multiply and in this way terminates the infection.

8. These enzymes are specific for every type of protein and can be demonstrated by laboratory methods. Now in the type of diseases that do not give an immunity to future infections of the same kind these enzyme soon disappears, but in diseases in which one attack confers immunity this enzyme remains in the circulation, so when this infecting agent gains entrance to the body at some future time, this enzyme destroys it before it can localize and multiply.

9. That the poison liberated from bacteria in certain diseases show a predilection for certain localities in the body and the typical symptoms of this disease is due to the location of collection of this poison, as in pneumonia the lung, meningitis the brain and spinal cord, etc.

Here, then, is the newer, more practical, explanation of bacterial immunity in brief. Do not confuse this bacterial immunity with toxin immunity as we see it in diphtheria.

1. The liability of the body to an infection depends on the infecting agents' ability to live and multiply within the body and not on the bacterial ability to produce a toxin. Natural immunity to any infection is due simply to the inability of that bacteria to multiply within the tissues.

2. That when bacteria do gain entrance to the tissues localize and multiply the body cells attempt to rid themselves of this foreign protein by a process of parenteral digestion, that is the cells stimulated by the presence of this foreign protein elaborate an enzyme that tends to break it down so it can be used as food or eliminated as waste. That this enzyme increases in amount and activity until it destroys the bacteria faster than they can multiply.

3. That this enzyme is specific for the bacteria, or other protein, that produced it and has the ability to digest this substrate outside of the body, making it possible to demonstrate

the phenomena in the laboratory.

4. That this enzyme or really the immune process stimulator has to do with the secondary non-poisonous molecules of the protein and not the poison group. That this poison group, when it is freed of the surrounding non-poisonous molecules, gives rise to the symptoms known as sepsis, namely increased pulse rate, rise in temperature, loss of body weight, etc.

5. That in infections which do not give an immunity after one attack this enzyme is rapidly eliminated, and in infections that are followed by an immunity to future attacks the enzyme is retained within the body and maintains this immunity by destroying the bacteria, when they gain entrance before they can localize and multiply.

How can we prove and apply this theory or explanation. I can quote you laboratory procedures and results that would take up the whole day but here is one practical illustration that you can verify by consulting any late book in medicine.

Typhoid bacilli isolated from cases of typhoid fever are grown on solid media in an incubator, washed off and treated by heat in such a manner as to destroy their ability to multiply but not change the chemical molecule of their specific protein.

This emulsion or suspension of dead bacteria having been standardized is injected into an individual that has never had typhoid fever. After an interval of a few hours this individual will complain of a little headache, a slight rise in temperature and pulse, in other words present a picture of very mild short-lived sepsis. After an interval of seven to ten days a second injection is given and this is followed after another similar interval by a third injection.

Now, according to the explanation given, this typhoid bacilli in the subcutaneous tissue will stimulate certain cells in the body to produce an enzyme that will destroy or better digest this foreign protein, the subsequent injection increase the amount and activity of this ferment. How can we prove this: First by taking some of this individual's blood, separating the serum from the blood cells, the enzyme always appearing in the serum, and then following a technic advocated by Abderhalden, we demonstrate that this serum contains a substance, enzyme like, that will convert the albumin of dead or living typhoid bacilli into peptone, thus proving the digestive action. Second we demonstrate that this substance is not present in a central or individual who has not had typhoid or has not been injected.

Now from the practical clinical side it has been proved in thousands and thousands of

instances that individuals thus injected will rarely, within certain time limits, contract typhoid fever when exposed to it, while individuals under the same circumstances that have not been injected contract in the majority of cases the infection.

What has been accomplished in typhoid fever has in a way been possible in scarlet fever, epidemic meningitis and whooping cough.

The reason the prophylactic base of vaccines is limited to-day is that as yet we have not acquired the ability to grow all bacteria out of the body so that they will have the same chemical composition that they have when growing in the body.

In cases where prophylaxis is not possible we can help our patients by having an autogenous vaccine made from the individual infection in this way obtaining the proper chemical molecule and helping nature by more rapidly increasing the needed ferment.

In closing let me repeat again, the more simple and practical, at least to my mind, explanation is this one based on the ferment or enzyme theory. Metchnikoff came near to this explanation years ago, in his white cell work, but it was too simple and he strove to find a more complicated one. This explanation easily falls in line with our knowledge of normal metabolism and digestion. The cells of the body are always changing foreign bodies that they come in contact with so they can eliminate them or use them as food. This is true in as low a form of animal life as the ameba or the jelly fish and this low form, too, demonstrates the use of these ferments as a protective force not only physically but mechanically as any one can testify who has injudiciously held a jelly fish in his hand.

Abderhalden in his work along this line of specific ferments has shown that when proteins, originating within the body itself, or abnormal as in pregnancy, cancer, etc., the cells of the body elaborate an enzyme specific for this proteid the purpose of which is to eliminate this substance. This gives us the foundation for our new serological tests for pregnancy and cancer.

Otitic Pneumococcic Bacteremia.—A. S. Tenner New York (Journal A. M. A., July 17, 1915), reports a case of simple otitis media, in which bacteria were found in the blood cultures on the ninth day of the disease, following a lowering of the temperature and a general bettering of the symptoms. The condition is sufficiently rare, he considers, to be reported. Recovery was retarded a little by the complication of a bowel trouble, but was otherwise complete.

PSEUDO-INFLUENZA VS. INFLUENZA VERA.*

(A CASE OF CATARRHAL FEVER.)

By E. D. BURNETT, Anchorage.

Recently a woman 24 years old came to me. I found the following train of symptoms: Bad breath, coated tongue, mildly inflamed throat, stuffy nose, hearing slightly impaired, tenderness over both kidneys and over urinary bladder, pulse 96; temperature 102, no appetite and soreness in the muscles of the neck and shoulder. She gave a history of a chill two hours before coming to my office.

A visit to the patient's bedside next morning verified a diagnosis of pseudo-influenza or catarrhal fever. I found much of the soreness in the muscles and over the bladder and kidneys gone; temperature 99.2-5, pulse 84, tongue cleared up, mild bronchial cough, nose open, throat clear, hearing about normal, and patient's appetite returned.

So we have here a pen-picture of pseudo-grippe, or catarrhal fever. This woman gave a history of mild nephritis when 15 years of age, otherwise our case would have presented the simple train of symptoms found in a so-called "acute cold."

I call your attention to the tendency of many of the profession to call a simple catarrhal fever la grippe. I urge you to make one or two extra visits and strive to be more accurate. Let us remind you that pseudo-influenza rarely ever runs a temperature longer than 36 hours and above 101 degrees, and is followed by a mild bronchial cough with a "running nose" for four or five days—providing the case has intelligent treatment. We know that *influenza vera* has a more severe train of symptoms, is far more prostrating, is more likely to be accompanied by complications, and should have careful after-treatment.

Let us impress these differences upon the laity as we strive to educate them in preventive measures.

Gunsot Fractures.—Perthes declares that too many fail to realize that the wound must be dressed without disturbing the immobilization. Any jar or displacement while the wound is being dressed does more or less harm. The plaster cast must be applied in such away as to prevent this entirely while allowing free access to the wound. He gives some illustrations of casts which permit this and also protect against soiling the edges of the window in the cast. When the wound has healed, then extension and other measures can be applied as for a simple fracture.

*Read before the Oldham County Medical Society.

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NEXT MEETING STATE ASSOCIATION, LOUISVILLE
September 20, 21, 22 and 23, 1915

COUNTY SOCIETY REPORTS

Boone—The Boone County Medical Society met with Jno. Walton, at Sayler Park, O., June 16, 1915. Meeting was called to order by President H. H. Hays. Members present were, Hofer, Rankin, Hays and Nunnelley. Visiting guests were Furnish, Lehmann, Gracely, Holt, Gordon, Hannah, McKim, Phinney, Mingus, R. H. Crisler, Corlton Crisler and Hubert Walton.

L. C. Hafer, asked for withdrawal card to become a member of the Campbell-Kenton County Medical Society, since he has moved to Covington.

J. S. Lehmann read a paper on "Feigned Disease," with report of cases which was very instructive and brought out a hearty discussion.

G. C. Rankin read a paper on "Inversion of the Uterus, with Report of a Case," which was very much appreciated by all present.

There being no further business to come before the society it was moved and seconded to extend to Dr. Walton a vote of thanks for the excellent dinner and entertainment of Boone County Medical Society. This was one of our best meetings and am sure all felt well repaid for coming.

Motion carried to adjourn.

S. B. NUNNELLEY, Secretary.

Carlisle—The Carlisle County Medical Society met at Milburn, June 1st, with President H. A. Gilliam presiding. The following were present: H. A. Gilliam, J. F. Dunn, R. T. Hocker, H. T. Crouch, G. W. Payne, W. L. Mosby and T. J. Marshall; also Drs. Merritt and Higdon, of Fancy Farm, who were elected honorary members of the society.

The meeting was opened with prayer by R. T. Hocker; after reading and adoption of the minutes of the last meeting, the committee on arrangements reported that the Baptist Church had been secured for place of meeting and that dinner would be served at the hotel.

The regular program was then taken up.

H. T. Crouch read a very interesting and instructive paper on "Puerperal Eclampsia," from his own personal experience eclampsia was most apt to occur during labor, he covered the subject thoroughly and brought out a general discussion by Dunn, Payne, Mosby, Hocker, Marshall and Merritt, Crouch closing.

The society adjourned for dinner, reconvening at 1 p. m.

A. R. Higdon read a paper on "Medical Ethics," which was enjoyed by all present and brought out a general discussion by all.

On motion the following committee was appointed to revise schedule of prices for this county: Marshall, Dunn and Mosby.

Motion carried that after this meeting all papers read before this society be turned over to the Secretary to be published in the Journal.

G. W. Payne read a valuable paper on "Joint Fractures," which was discussed by Hocker, Marshall, Dunn, Mosby, Crouch and Payne closing.

Motion carried to extend our thanks to the congregation for the use of the church. Also that we tender a resolution of sympathy to F. N. Simpson, who was unable to be present on account of a broken hip.

The society adjourned to meet at the Fair Grounds near Bardwell, the first Tuesday in September.

T. J. MARSHALL, Secretary.

Christian—The Christian County Medical Society met in regular session Tuesday, June 15th, at the Jennie Stuart Memorial Hospital with President Gates presiding. There were thirty-six members present and the following visitors: L. E. Burch of Nashville, D. P. Curry of Bowling Green, and W. R. Frey. E. M. Frey, T. L. Jones, J. M. Robinson, W. E. Bartlet, B. C. Boon, B. E. Escue, L. P. Trabue, of Todd county, and J. W. Crenshaw and G. H. Hatcher, of Trigg county.

After the reading and adoption of the minutes of the last meeting and the transaction of some new and old business report of cases were called for and the following cases were reported:

F. M. Stites, a case of "Diabetic Gangrene."

W. S. Sandbach, a case of "Gonorrhea in an Eight Year Old Boy."

T. L. Jones, "A Case of Gonorrheal Ophthalmia."

L. P. Trabue, a case of "Pellagra."

W. R. Frey, a case of "Hip-Joint Disease."

W. H. Watts presented a clinical case. History, negro, female, age 35, married, eight children, two dead, mother died of pneumonia. Present trouble began three years ago. Weight then 135 now 113. Pain and gas in abdomen. Relief after passing gas. Pulse 120, temperature normal. The chair appointed Drs. Burch, Frey, Crenshaw and Bell to make examination and diagnosis. Report by Dr. Burch, tuberculosis of many organs with abdominal adhesions.

J. G. Gaither presented a case showing transplantation of bone into the tibia resulting in a useful limb.

F. M. Stites read a paper on "Home Treatment of Epilepsy." Says great help can be rendered the unfortunate and laid particular stress upon family history. Begin treatment early. Do not punish children for the so-called "Fits of Anger," they may be epileptic attacks. Recommended the use of bromides.

W. R. Frey: A very excellent paper. Dr. Stites has covered the field. Family history and early treatment very important.

L. E. Burch: Look carefully for all sudden unconsciousness, licks on the head and in such you are justifiable in throwing up a flap for further examinations. In trephining remove the dura.

A. Sargent: Do not see any use for the bro-

mides. Use electricity and spondylotherapy. It is either traumatic or toxic.

F. M. Stites, (Closing): I am very thankful for the discussion. The bromides keep down injury while repair is going on. Very much abused. Should not lay aside.

At 12:30 we repaired to the large basement room where we enjoyed a delightful barbecued dinner prepared by Mrs. Wanda Williams, superintendent of the hospital, and her efficient assistants. Dr. Crenshaw returned thanks and the guests all did ample justice to this appetizing menu.

J. W. Crenshaw read a paper on "A Paper, Practical Rather Than Connectional." He refuted the idea that here is anything in the study or practice of medicine that makes the doctor an unbeliever in the one true and only God. He condemned in strong terms the "Dope Doctor" the proprietary and patent medicine dispenser. He closed by urging us to lend ourselves to the encouragement and support of the A. M. A. and the Journal in its efforts in upholding the dignity of the profession.

Discussion by Harned, Curry, Keith, Caudle, and the essayist in closing. Dr. Crenshaw was made an honorary member of the Christian County Society by a unanimous vote.

L. E. Burch in a paper on "Menstrual Disorders" outlined the normal menstruation in order that we might more fully understand the disorders. He took up the three principal forms of disorders, dysmenorrhea, amenorrhea and metrorrhagia. He dealt with each form in detail and gave us medical treatment for each disorder, making his paper one of the greatest of importance to both the general practitioner and the surgeon.

Discussed by Bell, Frey, Sargent, Trabue, and Gaither.

By a unanimous vote a resolution was passed that we invite the Kentucky State Medical Association to Hopkinsville in 1916.

No further business, we adjourned to meet again the third Tuesday in July.

W. S. SANDBACH, Secretary.

Scott—We are very proud to state that every doctor in Georgetown and Scott county, is now a member of the Scott County Medical Society. Every member is interested and working.

J. H. Eichberg, of Cincinnati, read a most interesting paper on "Therapeutics of the Circulation" at our June meeting.

D. B. Knox read a paper on "Painless Labor." Seventeen members were present out of a total membership of twenty-one.

D. B. Knox, Secretary.

Johnson—The Johnson County Medical Society met at the court house in Paintsville, Saturday, June 19, 10 a. m., and elected the following officers for the ensuing year:

F. M. Williams, Paintsville, President; Isaac

Lipskey, Van Leer, Vice President; G. V. Daniel, Paintsville, Treasurer; J. P. Wells, Paintsville, Secretary.

The following applications for membership were received and all applicants were duly elected as members of the society: Eugene Davis, Van Lear; P. P. Meade, Flat Gap; F. M. Witten, Oil Springs; T. B. Bailey, Nippa; W. R. Castle, Offutt; D. H. Daniel, Denver; and Grant Rice, Oil Springs.

After a rousing speech by the President, urging upon all, both the medical fraternity and the laity, the vital importance of cooperating in the great battle for hygiene and sanitation and prevention of disease, in which he was frequently interrupted by applause. The Committee on Program made the following report:

The subject for discussion at our next meeting to be held at the courthouse in Paintsville, on Saturday, July 3, at 10 a. m., is as follows:

Acute and Chronic Diarrhoeal Diseases of Childhood.

(a). Causes—**W. R. Castle, Isaac Lipskey.**

(b). Pathology—**Eugene Davis, F. M. Williams.**

(c). Diagnosis—**D. H. Daniel, T. B. Bailey.**

(d). Treatment—**J. H. Holbrook, J. P. Wells.**

All are urged to attend and come prepared for discussion for it promises to be intensely interesting and mutually profitable.

J. P. WELLS, Secretary.

Taylor—The Taylor County Medical Society met in the office of the Secretary, June 10, 1915. Present, J. B. Buchanan, O. M. Kelsay, S. H. Kelsay, O. R. Reesor, R. W. Hazelwood and J. L. Atkinson.

Minutes of the April meeting read and approved. The May meeting of the society was held in conjunction with societies of Adair, Green and Marion counties, at Campbellsville.

A clinical case from the county alms house was sent in for examination. The society concurred in a unanimous diagnosis of general tuberculosis, with suppuration and necrosis of the ilium.

J. L. Atkinson read a paper on "The Management of Interrupted Pregnancy." In the discussion of the paper Dr. Reesor called attention to the prevalence of delayed or missing menstrual periods in young women, which they attribute to taking cold.

S. H. Kelsay called attention to the possibility of sexual intercourse causing premature delivery. He also says that when there is any difficulty in removing shreds use a douche and the debris will pass away.

The other essayists for the day were absent and the society spent some time in reporting and discussing cases met with in the ordinary round of practice.

J. L. ATKINSON, Secretary.

Wayne—The Wayne County Medical Society met on June 15th. We did not have a regular program for the evening, but almost every one present made a short talk on some current medical news.

A. W. Cain, of Somerset, Councilor for this district, gave us a talk along the lines of better organization and the importance of every doctor in Kentucky being a member of his county society.

J. A. Bolin and **Carl Norfleet**, both of Somerset, were with us at this meeting. **Carl Norfleet** read a very interesting paper.

The Wayne county doctors present were J. L. Hart, of Millsprings; J. W. Bryant, Frazer; A. S. Cook, Monticello; C. B. Rankin, Monticello; J. F. Young, Monticello.

It was suggested at this meeting that the Pulaski County and Wayne County societies have a joint and open meeting in August at Millsprings. It was left to the secretaries of the two societies to arrange the meeting.

Ice cream and cold drinks were served after which the visiting doctors returned to Somerset, where they arrived at 1 a. m., the next morning.

Come again doctors.

J. F. YOUNG, Secretary.

NEWS ITEMS AND COMMENTS

The Campbell-Kenton County Medical Society was the guest of Mr. Thos. Cody at a barbecue at his farm on Thursday June 17.

Mr. Cody's reputation as an entertainer assured a good time to every one who attended. The committee had an interesting program arranged.

BOOK REVIEWS

Diagnosis and Treatment of Digestive Diseases by George M. Niles, M. D. Published by P. Blakiston's Son & Co., Philadelphia. It has 575 pages, with one colored plate and eighty-six other illustrations. It aims to deal in an effective manner with the questions, "What is the disorder?" and "What should be done for it?" Part I deals with the general diagnosis and treatment of digestive diseases; Part II, with special diagnosis and treatment of digestive diseases. Diagnostic methods, discussions of the medical and surgical aspects of cases, general considerations of diet, are important chapters in Part I. The Neuroses, the Gastrites. Tumors of the stomach and the Duodenal Ulcer are some of the interesting chapters in Part II. Diarrhea and Dysentery, Constipation and Intestinal Parasites are some of the important chapters in Part II also. This book has real value and to those who do special work along this line, it is of especial importance.



J. J. Moore

PRESIDENT KENTUCKY STATE MEDICAL ASSOCIATION, 1915

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No. 10

EDITORIAL.

THE ANNUAL MEETING.

The annual meeting of the Kentucky State Medical Association for 1915 will be held at the First Christian Church (Dr. Powell's Church) September 21, 22, and 23. The first session of the House of Delegates will be on September 20. Everyone who was present at the meeting held in Louisville three years ago under the auspices of the Jefferson County Medical Society will, we feel sure, be present at this meeting. The Jefferson County Medical Society writes us that they expect every doctor in Kentucky to come this time and it is to those who did not accept their hospitable invitation before that this editorial is especially written. A banquet has been arranged at the Seelbach Hotel for Wednesday evening, September 22, at seven o'clock. This banquet will be entirely informal, but will be an elaborate and delightful as was the former one. Dr. G. A. Hendon will be the toastmaster, and among those who will respond to toasts are Hon. A. Y. Ford, President of the University of Louisville; and Drs. J. W. Kincaid; William W. Anderson; Dan Griffith; and Dr. William L. Rodman, President of the American Medical Association.

In the history of this Association, such complete arrangements have not been made for the conduct of a meeting. The scientific program, which has been arranged by Drs. Moren and Kincaid, is splendid. There are just the right number of papers and ample time will be given for discussion. The medical profession of Louisville and Jefferson County is a unit in making such preparations for this meeting as will insure its success. They deserve, and ought to receive the support of not only every county society, but of the physicians of the State for their efforts to break all records to make this the greatest medical meeting that has ever been held in Kentucky. It is especially important that every member

who attends secure a certificate from his local agent when he purchases his railroad ticket, so that he can secure his return ticket for one-half fare plus fifty cents.

No one going to Louisville will have any anxiety about rooms and good meals. Headquarters will be at the Seelbach Hotel, and it is advised that members who desire rooms at either the Seelbach, Watterson, Tyler, Galt House, Louisville Hotel, or Willard, write immediately and tell them the sort of room desired.

The JOURNAL confidently promises every tired, hard-working physician who comes to Louisville such a hearty welcome and such a pleasant and profitable meeting that he will return home freshened up and stimulated for another year's work. This guarantee extends also to his wife who, more than in any other profession, shares the trials of her husband. Recognizing this, Dr. J. T. Windell has arranged for a lawn party at his country place near the edge of the city, for the visiting ladies on the afternoon of Wednesday, September 22. Let's all come together and bring our wives with us, and make the 1915 meeting the biggest yet ever held.

RAILROAD RATES FOR THE LOUISVILLE MEETING.

The Kentucky State Medical Association will meet in Louisville September 20, 21, 22, and 23. The House of Delegates alone will meet on the 20th. The scientific session will begin on the 21st.

Delegates or members coming from Cincinnati, Ohio, Jellico, Tennessee, and all stations in Kentucky excepting on the M. & O. Railroad will be granted a reduction in their return fare, from the place of meeting, of one-half of the regular rate plus fifty cents, by the same route by which they came to Louisville. IN ORDER TO SECURE THE REDUCED RATE IT IS NECESSARY TO SECURE A CERTIFICATE RECEIPT FROM THE AGENT WHEN YOU LEAVE YOUR

HOME STATION. IF YOU DO NOT GET THIS CERTIFICATE FROM YOUR TICKET AGENT, YOU WILL NOT GET REDUCED FARE FOR YOUR RETURN TRIP.

Certificate receipts can be procured three days before the meeting and can also be secured on Monday and Tuesday, September 20 and 21. It is therefore advised that all members arrange to leave for Louisville so as to be there on Tuesday morning, and all delegates arrange to be in Louisville by noon on Monday. The certificates received are good for three days after the meeting adjourns, not counting Sunday.

BE SURE TO SECURE CERTIFICATE RECEIPT FROM THE TICKET AGENT WHEN YOU PURCHASE YOUR TICKET TO LOUISVILLE, IF YOU DO NOT YOU CAN NOT GET REDUCED RATES FOR YOUR RETURN TRIP.

BUSINESS.

As has been the custom for many years, we publish in great detail the affairs of the Association as reflected in the reports of its officers, especially giving every item of expense and every step taken by them during the year. Have your resolutions, speeches and reports all ready for the House of Delegates. Ample time is given for any county society to instruct its delegates on any subject, and the delegate from any county society should confer with his fellows as to what should be done at this meeting. Every member is urged to read all of the reports. If anything is going wrong, the House of Delegates is the place to right it. The JOURNAL urges the membership to read every page of this issue so that they can take the intelligent interest in the Association's affairs that is essential to its continued success. You are all stock-holders in this great organization. It is in better shape in every way this year than ever before; but remember that it is your money that is being spent, your work being done, and if you are not familiar with every detail it is your fault and not the JOURNAL'S, because everything that is going on is printed in it.

THE DISCUSSIONS.

The Kentucky State Medical Association is a democratic association where every man is his fellow's equal in opportunity, anyway. If you are interested in any subject on the program, which is printed in this issue, for the Louisville session, and don't discuss it, it will be your own fault. When you have looked over the program, pick out the subject in which you are interested and write the secretary at once. Every paper on the program is, or soon will be, in print. A galley proof will be sent any member of any one paper. This will give you an opportunity of finding the

views of the essayist and of deliberately and carefully preparing your discussion from your own experience and knowledge. If you prefer, write your discussion out and hand it to the stenographer just as you want it to appear in the JOURNAL. This plan has worked so well for the past several years that it is continued. Write to-day for the paper you wish to discuss.

AN INNOVATION.

The committee on scientific work has introduced an innovation in the scientific program for the Louisville session that will bring many members who would not otherwise be present. Dr. John B. Murphy of Chicago, ex-president of the American Medical Association, and an honorary life member of the Kentucky State Medical Association, who, Dr. William Mayo says, is the greatest surgical teacher in the world, will conduct, on Wednesday afternoon, a clinic of an hour, on the modern treatment of fractures. This will be illustrated with stereopticon slides and models. Dr. Murphy's treatment of a Colles' fracture will pay every man who hears and sees it for his trip to Louisville.

In the same way the committee has arranged with Drs. Reddick and Speidel to conduct for an hour a similar practical course on the management of obstetrical cases. This will be illustrated and demonstrated in such a way as to be of the very greatest practical value.

We do not feel that we are making invidious distinctions in calling special attention to these two hours, because every paper on the program is to be one of practical definite interest and value. These two special hours, however, are to be devoted to the interests of the everyday practicing physician who is confronted with big problems, especially in fractures and obstetrics; and two of the leaders of the profession in these specialties are to handle them. No physician in active practice can afford to miss this program.

ENTERTAINMENTS.

The Jefferson County Medical Society through its various committees, which includes practically every physician in good standing in Louisville, is making special arrangements and urges every doctor in Kentucky to be present at the State meeting and bring their wives with them. Among the social features will be a lawn party for the visiting ladies, by Dr. J. T. Windell at his country place near the edge of the city, on Wednesday afternoon. On Wednesday evening there will be an informal banquet at the Seelbach Hotel and every member who recalls previous banquets given under the auspices of

the Jefferson County Medical Society will be sure to be present at this one.

The scientific entertainment, as indicated in the program, will be of the very highest and best class.

THE COLLECTED PAPERS OF THE MAYO CLINIC.

Amongst many men, some fairly and others poorly equipped for doing surgery, it has become rather a custom to refer too slightly or "to damn with faint praise" the great leaders in the surgical profession who are making the most marked advances in both its art and science. Such men forget the tremendous problems already solved at such centers, and, still more, the problems which confront us which are still unsolved.

These thoughts come to us after the perusal of the Collected Papers of the Mayo Clinic for 1915, which is just come from the Saunders press. No one who does surgery at all can afford to be without this collection. Nor is this all; every general practitioner can read with the greatest interest and profit the many pages as to diagnostic technique, and if every physician in Kentucky could read this valuable Collection, it would mean that many patients would not be subjected to needless surgery and that many more would be advised to submit to the simpler surgical procedure in the early stages of the disease instead of waiting until many of them are practically hopeless. The opening article is on Mouth Infection as a Source of Systemic Disease. Surgery of the Tonsil, Chronic Gastric Disturbance, the Differentiation of Gastric Neurosis from Organic Abdominal Disease, Chronic Ulcers of the Stomach and Duodenum, Intestinal Parasites in Minnesota, Chemical Tests of Renal Function, Clinical Notes on Hydronephrosis, The Advisability of Prostatectomy, A Summary of Our Present Knowledge of Goitre, X-ray in Diagnosis of Tuberculosis, Clinical Diagnosis of Pleural Effusions, Treatment of Tuberculosis of the Spine, Study in the Treatment of Fractures, Study in the Etiology of Cancer, Recent Advances in Orthopedic Surgery, the Hospital as an Educational Institution,—all of these are subjects which will appeal to everyone. The JOURNAL desires to convey to the Mayo Clinic the hearty approval of the medical profession of Kentucky and to express, in the small degree we can, the gratitude we feel for the remarkable contribution to science and to medical sociology which have come from its marvelous growth and development.

THE HUNDRED PER CENT CLUB.

The membership all over the State will be interested in the changes in the list of the Hundred Per Cent Club of the State Association. It will be remembered that this consists of those county societies which have reported as many members in good standing as they had last year. Those marked with a star have increased their membership over last year and those marked with two stars have every eligible physician in the county. If your county is not on this list, please look into it and help your county officers to put it in there next month.

*Adair	*Livingston
*Anderson	**Lyon
Ballard	McCracken
*Boyd	*McCreary
*Boyle	*McLean
Bracken	*Magoffin
*Breathitt	*Madison
*Breckinridge	Marion
*Bullitt	Martin
*Carlisle	*Mason
Christian	*Meade
*Clark	*Mercer
Clay	*Menifee
*Clinton	*Metcalfe
*Cumberland	Montgomery
*Cumberland	*Morgan
Elliott	Muhlenberg
*Estill	*Nelson
*Fayette	*Nicholas
*Floyd	*Ohio
*Fulton	Oldham
*Fleming	Owen
*Gallatin	**Owsley
*Garrard	*Pendleton
*Grant	*Perry
*Graves	*Pike
Green	**Powell
Hancock	Robertson
*Hardin	**Rockcastle
*Harlan	*Rowan
Harrison	*Russell
*Henry	**Scott
*Hickman	*Spencer
*Hopkins	*Simpson
*Jefferson	**Taylor
*Jessamine	*Todd
*Johnson	**Trimble
*Knox	*Union
*Lawrence	Washington
Lee	Wayne
**Leslie	*Whitley
*Lewis	Woodford
*Lincoln	

THE COMMERCIAL EXHIBIT.

As a matter of course, the commerciale exhibit will be better this year than it has been heretofore. Our members have responded so generously to our efforts to encourage our exhibitors that we have found this year that the exhibitors are responding even more gladly than they have ever done before. We are confident that if there were nothing else to be seen or heard in Louisville except the commerciale exhibits, it would be worth the time and while to attend for its value alone. Only those firms can exhibit that are reputable and have something worth exhibiting. Instrument men, pharmacists, and everyone else having things of interest for physieians, including the long distance telephone, will be on hands to show you the very latest. Save your orders until you can see what you want.

CONGRATULATIONS TO CLOVERPORT.

We publish herewith a sanitary privy ordinance, passed by the City Council of Cloverport. This ordinance may well serve as a model for other towns, and as a compliment to its originators, we suggest that it be known as the Cloverport Ordinance. It will be remembered that under the leadership of the local ministry, a health eampaign was conducted through the churches in Cloverport for several weeks this summer, and this practical far reaching ordinance is but one of the many indications of improvement. We venture the suggestion that no revival in any church or churches in Kentucky has produced more effective results than the health revival conducted through the influences of the ministry of Cloverport. The ordinance is as follows:

ORDINANCE NO. 108.

"The City Council of Cloverport do Ordain as Follows:

"Section 1. There shall not be constructed or erected within the corporation limits of the City of Cloverport, Kentucky, from and after adoption, approval and publication of this ordinance any new privy of any type than that known as the Kentucky Sanitary Privy as described and specified in the Bulletin of the State Board of Health of Kentucky under date of March, 1914, or such other privy as the State Board of Health of Kentucky shall approve, or a flush type water closet that shall be provided with an adequate water supply and connected with a city sewer, a septic tank of a Kentucky Sanitary Privy.

Section. 2. Any surface privy (of a type other than those permitted in Section 1 of this ordinance) shall be provided with a water-tight box or bucket, provided with handles, and of a capacity of not more than (1) one

eubit foot of contents, for each stool, or seat opening therein. Such surface privy shall be easily accessible for the purpose of cleaning or disinfecting them. These receptacles shall be placed on a wooden or conerete or brick support and shall not be allowed to stand in contact with the ground.

Section 3. No manure or any other objectionable matter resulting from the care of maintenance of horses or eattle upon any premises within the City of Cloverport shall be allowed to remain or to accumulate for a period of more than one week without being collected and removed from the City Limits. This section (No. 3) is to apply from May 1st to October 1st of each year. If it shall appear that such accumulation of animal waste or manure is productive of objectionable odors or the breeding of flies within periods of less than one week, then such accumulation shall be removed as often as is necessary to prevent such conditions occurring. The manure of domestic animals may be used within the City for the purpose of fertilizing gardens or other agricultural land provided that it be spread in a thin layer upon the ground or put into the soil.

Section 4. No garbage or other refuse shall be thrown upon any street, alley, or vacant land within the City of Cloverport. All such garbage or waste matter shall be placed in a covered receptacle and on days to be designated by the Mayor for collection of such matter. This receptacle shall be placed in a spot most accessible to the collector, who shall remove it as hereinafter provided.

Section 5. Upon every surface privy, or privy other than a Kentucky Sanitary Privy, or a flush type water closet, or septic tank as described in Section 1 of this ordinance, the owner of the property on which the same is located shall have same cleaned at least once a month and shall pay a fee of (50c) fifty cents for each visit of the scavenger, of not more than one visit per month, provided however; the property owner may at his own option have the work done by other than the scavenger. The scavenger shall make his visit between the 1st and 10th of each month.

Section 6. There shall be appointed by the Mayor, with the approval of the City Council, a garbage collector and a scavenger. The garbage collector shall collect and remove at least once a week all garbage that shall be placed in suitable containers in an accessible place, and shall remove it to a place that shall be designated by the Mayor.

Section 7. Any person, firm, eompany, or eorporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction in the City Court shall be fined not less than (\$1.00) one

dollar nor more than (\$5.00) five dollars for each offense, and each day this ordinance or any part of the same is violated shall be deemed a separate offense.

Section 8. This ordinance shall take effect from and after July 1st, 1915.

C. W. HAMMAN, Mayor.

Attest: PAUL LEWIS, Clerk.

WAYNE COUNTY.

Dr. A. W. Cain, the very active Councilor of the Seventh District, writes a most encouraging report from Wayne County. He especially takes occasion to compliment Dr. J. F. Young, the very effective county secretary. He asks that the members be urged to attend the meetings as regularly as Dr. Young and Dr. Cook always do. This advice may be taken to heart by the members of every medical society in Kentucky. If all the members would attend every meeting and if every one present would do his share to make the meeting interesting and instructive, all our professional ideals would soon be attained and the dreams many of us have held as to the time when there shall be available for every sick person in Kentucky a competent diagnostician will be realized.

DR. BLUE, PRESIDENT A. M. A.

The elevation of Dr. Rupert Blue, Surgeon-General United States Public Health Service, to the Presidency of the American Medical Association at its recent San Francisco session was peculiarly appropriate. Dr. Blue's great work in the eradication of the plaque from the Golden Gate is one of the monumental achievements of modern sanitary service. Dr. Blue is not only a great physician and sanitarian, but he is one of the most charming men personally in the profession. More has been accomplished in the Public Health Service in his administration than in all its previous existence. The *JOURNAL* congratulates both Dr. Blue and the American Medical Association.

Chlorinated Lime in Gangrene.—Vincent (Press Medicele, October 22, 1914), reports treating gangrenous wounds with a mixture of fresh chlorinated lime with ten parts of powdered boric acid. He first cleanses the wound and then dusts the above powder over it and the surrounding skin, using a generous quantity. In from two to three days the wound is changed to a healthy condition. New dressings are employed in twenty-four hours, providing there is much secretion; otherwise the dressing is not removed for forty-eight hours.

SCIENTIFIC EDITORIALS.

A FEW SUGGESTIONS ON LABORATORY DIAGNOSIS.

A laboratory sufficient for the physician's ordinary work, whether it be his own or one to the use of which he has ready access, should be one of the principal features of every doctor's diagnostic equipment.

While it is not a perfect machine for diagnosis and will fill no place in medicine other than its own, it is, when properly made use of, one of the most dependable diagnostic adjuncts at our command.

If it is to be productive of the most good, however, we must not only be able to make an examination or know the meaning of a report but we must also know the clinical significance of our findings and be able to interpret and profit by a negative as well as a positive result. It is not enough to know that albumin and tube casts in the urine mean renal pathology or plasmodia in the blood mean malaria but we must also know that disease may be present without the characteristic evidence being found at every examination and especially at periods of time or stages of the process which are unfavorable to the elimination or availability of the elements requiring the use of a laboratory for their detection.

It is not the whole thing in diagnosis, it is only an aid and should be so considered, but when used with a thorough working knowledge of both its virtues and its limitations and its results considered together with the results of examination by all other means at our disposal, it is of inestimable value.

In many cases it is of little or no use except to eliminate or exclude some possible conditions by the absence of certain findings, thereby, ruling out of consideration those diseases towards which our attention would otherwise have to be directed. In other cases its findings are indicative of definite pathology only when associated with symptoms or signs of the same condition. In still other cases it will enable us to make a positive diagnosis, even in the absence of any other manifestations.

In conducting a laboratory examination, whether it be of the blood, stomach contents, urine, sputum or other substance, the specimen should be taken at a time when it would most likely show evidence of disease, and all preliminary measures subservient to the requirements of the particular case should be carried out, else, it would likely amount to but little, for instance, we could no more expect a positive Widal reaction in typhoid fever before the agglutinins had formed, than an intestinal perforation before ulceration had taken place, neither could we expect to gain any information from a gastric analysis

unless we had previously given a test meal and withdrawn the contents at the proper time.

If we have reason to believe that we are dealing with a disease in which the laboratory evidence is not uniformly present, we should not be contented with one negative examination, it matters not how painstaking we may have been in our efforts to make it a success, but should repeat the procedure until proof of the suspected pathology is found or until we are reasonably certain of its absence, by so doing we will often be able to satisfy ourselves as to the diagnosis instead of being left in doubt.

In many conditions more than one examination is often necessary before we can form any definite conclusion, for example, in pulmonary tuberculosis where the finding of the causative organism is often difficult, one negative examination of the sputum means but little, while on the other hand the finding of the tubercle bacillus means a positive diagnosis.

E. W. JACKSON.

TREATMENT OF CONSEQUENCES OF CONCUSSION OF THE BRAIN.

In a recent article published in the *Medizinische Klinik*, April 25, 1914, xi, No. 17, page 480, Weber and Neubert call attention to their experiences in the treatment of the sequelae of concussion from whatever source. The seriousness of the after effects is such as to justify the widest dissemination of their experiments and results of treatment. The cases studied were all serious ones, that is to say, there has been a somewhat prolonged period of total unconsciousness after the accident or injury, usually a blow or fall upon the head, a wound from a bullet or scrap of shell or shrapnel, but of such a character as to produce a generalized condition, without evidence of any destruction localized or actual organic lesions of the brain structure. While we will not take issue at the present time with the use of the old word "concussion," preferring, as we do, a more definite term, and while we believe there are small organic changes, due to laceration and punctate hemorrhages, still the injury may not produce such gross pathological changes as to localize symptoms, but rather a generalized effect embraced under the older and generalized term "concussion." The main and essential features, however, is to bear in mind that though we have these changes, restoration can, as a rule, be brought about by proper remedial measures. A very close analogy could here be drawn between post concussion and post insolation (thermic fever) effects. The writer has frequently been much impressed by the close resemblance between the after effects of heat

and sun effects and so-called concussion. In each of these cases, I have for years maintained that in certain physio-therapeutic remedies, we have the best means at our command for a seeming or at least functional restoration of cases of concussion and insolation and some twelve years or there about ago, in discussing before the Jefferson County Medical Society, a paper on Concussion by Dr. Chenoweth, I dwelt on the value of hydrotherapy. Several years later, in an article on insolation, published in the *Journal of Advanced Therapeutics*, I outlined in detail, the same methods now prominently brought to the notice of the medical profession by Weber and Neubert.

With the pardon of the reader for this personal digression and self laudation, we call attention to the fact that the disturbances that follow are generally headache, restless sleep, dizziness in climbing stairs or walking fast, and inability to do any muscular work, sweating and having to give up when such is attempted. He has found that in such persons, the distribution of blood during muscular exertion differs from the distribution under normal conditions. The concussion injures the central mechanism for the innervation of the blood vessels; both the peripheral and the cerebral blood vessels are involved. It seems plausible to assume that this is the cause of the headache and other symptoms which follow and persist after concussion of the brain. The headache and dizziness are connected with the damaged central mechanism for the innervation of the vessels, as also the weakness and inability to do muscular work. In treatment, drugs give no relief.

I wish here to again insist that drugs give little or no help save in certain conditions, have little or no bearing on the concussion itself, but the continued existence of which may cause additional discomfort, viz: digestive disturbances, toxemias and stases, arising from the gastro-intestinal tract.

To hydrotherapy, we must turn for relief. Those who would like to investigate the physiological actions underlying this measure, should consult one of the few really good text books on the market, and read carefully the action of water on the vascular system, especially the vasomotors. These authors remarked: "surprising benefit was realized from alternating hot and cold douches. At first the relief is transient, but the improvement becomes permanent under a course of the alternating douches. The relief is striking within half an hour, even after one alternating douche and in two or three weeks, the improvement becomes a complete cure. The douches are given with hot and cold water for half a minute each (14 and 45 C. or 59 and 113 F.) applying the cold jet a trifle longer

than the hot, and ending always with the cold. The cold seems to be the active factor; its effect is merely enhanced by the hot jet. Seven cases are described to illustrate the prompt and reliable curative action of the procedure in these conditions.

They comment upon the ergographic and other changes studied experimentally in these cases and how there is registered a dilatation of the vessels in the hand or forearm during some strictly localized muscular exertion, such as dorsal and plantar flexion of the foot hanging free. After concussion of the brain, the vessels shrink, instead of becoming distended, during this muscular exertion.

Of the value of this post-treatment of concussion, the writer has this to say, (Pope, *Practical Hydrotherapy*, 1909, p. 413) "The after treatment is important, and should consist of daily graduated cold applications, care being taken to thoroughly cool the head before each treatment. As a result of the heat-stroke, the patient's nervous system and vasomotor mechanism have received a severe shock, and we often find traces of injury to nerve functions, such as headache, vertigo, insomnia, nervous irritability, altered disposition, tender spine, indigestion, anemia, irregularity of respiration and heart action, morbid dreads, mental excitability, or an incapacity to stand heat or the sun's rays. In the after treatment, it is essential therefore, and advisable that the patient be put upon a light diet; that he refrain from the eating of meat during the warm weather; that he be compelled to drink daily at least one-half gallon of water; that all digestive conditions and constipation be corrected; and that all measures be continued which will stimulate and regulate the nerve functions and place him physically and nervously in prime condition. For this purpose, institutional treatment should be commenced immediately after the attack and continued during the period of hot weather and long into the fall and winter. Nothing is superior in these cases to the careful and persistent use of the electric light bath for several minutes, keeping the ice-helmet on the head, followed by the horizontal rain bath at 100 F. for one minute, reduced to 65 F. for one-fourth minute. As soon as reaction is well established and resistance increased, we may add the cold jet douche at 60 degrees F. up and down the spine, paying especial care to the cervical region. In very sensitive cases the electric light bath may be omitted and the treatment given as outlined, the patient wearing the ice-helmet during the rain bath. The author has had the pleasure of seeing a number of cases entirely freed from unpleasant sequelae by the adoption of these methods.

The Scottish or alternate douche, a stronger and more stimulating procedure, can be used as soon as the patient stands the plain douche well. The temperature, alternations, and duration are detailed above. The pressure should range from fifteen pounds at the start to fifty or even higher if the patient desires and stands well the force of the stream.

We believe, that in the near future the realm of hydrotherapy will be more appreciated.

CURRAN POPE.

THE PREVENTION OF DIARRHEAL DISORDERS IN CHILDREN

In no domain of preventative medicine has there been more gratifying success than in the prevention of the common bowel diseases of summer time in children. Statistics obtained from the various Milk Fund Commissions and the experience of physicians in general show that there is far less bowel disorder among children that there was formerly. Perhaps the most important factor in this result is the securing of pure milk, free in a large measure from bacterial contamination. Even where certified milk of a high grade is not obtainable proper sterilization of the milk reduces greatly the frequency of the bowel infection. When however, there has occurred some infection of the intestinal contents experience has shown that milk is one of the worst foods that can be administered. Every type of bacterium apparently finds a good culture medium in milk. The general classes of putrefactive and fermentative bacteria can grow in milk and produce irritating and toxic products. In the cases of diarrhea in infants and children, it is important immediately to stop milk feeding and substitute starvation or semi-starvation by administering such foods as are not good culture medium for the types of organism present. Particularly in the case of offensive stools is it important to keep the child upon a very thin non-albuminous diet. The thorough purging with oil to remove all decomposing food in the intestines will frequently stop short an attack of diarrhea, and if the starvation is maintained for a few days there will usually be a great amelioration if not an entire cure of the attack. The use of butter-milk is becoming more general and is based upon the sound principle that the strongest types of lactic acid bacilli will prevent the development of other types of pathogenic bacteria.

It is important, therefore, as milk constitutes a large part of the food of the infant that it be as free from contamination as possible. It is possible, however, that bacteria may be carried into the bowel by the use of other foods and it is by no means uncommon

that the infant or young child gets hold of fruits and vegetables in the summer time which have begun to rot. Over-ripe fruit has been an exciting cause of diarrhea. Over-feeding or the taking of foods that are too hot or too cold may lessen the resisting power of the system so that the bacteria which have been held quiescent are enabled to multiply and cause local infection. Ice cream is especially injurious to young children because the frigidity itself is hard upon the digestive tract and also on account of the fact that cream rising through milk will pick up most of the bacteria of the milk, so that cream as ordinarily served is far more infected with bacteria than average milk. Freezing such a mixture simply keeps the bacteria quiescent until the cold mass has been warmed up in the intestines and then the multiplication of these foreign bacteria proceeds almost unhindered.

It is hardly necessary to dwell upon the relationship between flies and the infection of food. Essentially a filth conveying animal it infects all food with which it comes in contact. In houses that are not properly screened, or in which no attention is paid to the flies, it is difficult to prevent infection of the young child. Equally important is the reinfection of the child by flies getting into the stools and from thence infecting the food of the child. It is particularly important that the stools be sterilized as quickly as possible after passing. Various soft drinks which are given to very young children, apparently without any objection on the part of the parents, and the hokey-pokey gelatine compounds take their toll of children in the hot weather.

One should begin in the spring to prepare for the hot weather and its unfortunate effects upon weak, debilitated children. It is wise to insist always upon the proper strengthening of these feeble children so that they come into the summer with their resistive powers at the highest point. Delicate and feeble children should be sent away to colder climates for if they do not succumb to intestinal disorders their resistance to various lung disorders is very much lower and broncho-pneumonia is frequently the terminal infection. When the hot weather has arrived it is well, as far as possible, to keep the child cool. Too warm clothing and all other agents which increase the heat of the child favor the infection by bacteria; on the other hand, keeping the child cool by any methods which are feasible not only lessens the frequency of attacks but also helps the child in its fight for life.

PHILIP F. BARBOUR.

OFFICIAL ANNOUNCEMENTS

PROGRAM OF GENERAL MEETING KENTUCKY STATE MEDICAL ASSOCIATION.

TUESDAY, SEPTEMBER 21.—9 A. M.

Call to Order by the President . . . JOHN J. MOREN, M. D.
Invocation . . .
Address of Welcome . . .
Response to Address of Welcome . . .
Address of Retiring President . . . JOHN J. MOREN, M. D.
Installation of the President.
President's Address . . . J. W. KINCAID, M. D.
Report of Committee on Arrangements . . . CHAS. W. HIBBITT, M. D.

SCIENTIFIC SESSION—10 TO 12 A. M.

Pneumonia in Children . . . JOSEPHUS MARTIN, Cynthiana
Catarrhal Pneumonia . . . J. L. DISMUKES, Mayfield
Lobar Pneumonia . . . B. W. WRIGHT, Bowling Green
A Plea for the More Thorough Examination of Patients
Presenting Symptoms Referable to Tuberculosis . . . O. O. MILLER, Louisville

SPECIAL ORDER AT 12 M.

Oration in Medicine—To-day and Yesterday in Medicine . . . O. P. NUCKOLTS, Pineville

TUESDAY AFTERNOON—SCIENTIFIC SESSION—2.00.

Facts in Ophthalmology Essential to the General Practitioner . . . T. W. MOORE, Huntington, W. Va.
Some Observations on the Ossifications of the Bones of the Hand (Lantern Illustrations) . . . J. W. PRYOR, Lexington
Common Sense in Dermatology . . . M. L. RAVITCH, Louisville
Focal Infections . . . N. T. YAGER, D. D. S., Louisville
Complications of Middle Ear Suppuration . . . L. S. GIVENS, Cynthiana
The Head Cold: Parts Involved, and Some of the Results . . . C. A. MOSS, Williamsburg
The Diseased Tonsils; What Shall We Do With Them? . . . C. E. PURCELL, Paducah
The Uses and Abuses of Narcotics and Stimulants . . . F. H. CLARK, Lexington
The Harrison Law . . . A. E. STEVENS, Mayfield

TUESDAY EVENING—8 P. M.

PUBLIC SESSION.

Annual Oration . . . W. L. RODMAN,
President American Medical Association, Philadelphia.

WEDNESDAY, SEPTEMBER 22—9 A. M.

Some Points in Diseases of Children . . . E. B. McMORRIES, Clinton
Roentgen Ray in the Diagnosis of Bone Lesions . . . J. B. MASON, London
Anaesthesia . . . W. HAMILTON LONG, Louisville
Surgery of the Infected Hand . . . W. L. GAMBILL, Jenkins
Rabies . . . L. H. SOUTH, Bowling Green
The Present Status of the Surgical Treatment of Goitre . . . J. R. WATHEN, Louisville
Medical Aspect of Diagnosis and Treatment of Gastric and Duodenal Ulcer . . . J. T. MCCLYMONDS, Lexington
Gastric and Duodenal Ulcer; Surgical . . . M. CASPER, Louisville

SPECIAL ORDER AT 12 M.

Oration in Surgery . . . J. G. GAITHER, Hopkinsville

WEDNESDAY AFTERNOON.

Digitalis: Its Indication and Manner of Use . . . W. W. ANDERSON, Newport
Medico-Legal Paper . . . HON. FRED FORCHT, Louisville
Difficult Presentation . . . J. T. REDDICK, Paducah
Demonstration in Obstetrics . . . EDWARD SPEIDEL, Louisville
Fractures (Lantern Slides) . . . J. B. MURPHY, Chicago
Radicalism or Conservatism in Surgery . . . A. H. BARKLEY, Lexington
Importance of Posture in Diagnosis, Operations and Treatment of Lesions in the Rectum and Sigmoid (Lantern Slides) . . . G. S. HANES, Louisville
Endometritis of the Unmarried . . . J. L. PHYTHIAN, Newport

THURSDAY, SEPTEMBER 23—9 A. M.

Therapeutic Measures Other Than Drugs . . . CURRAN POPE, Louisville
The Use of Iodine and the Iodides in Medicine . . . E. W. JACKSON, Paducah
Heart Complications in Infectious Diseases . . . A. L. THOMPSON, Madisonville
Cardio-Vascular Disease . . . W. J. BOGESS, Louisville
Syphilis of the Heart . . . J. R. MORRISON, Louisville
Intensive Treatment of Syphilis . . . I. N. BLOOM, Louisville
Chronic Prostatitis . . . HERBERT BRONNER, Louisville
Verumontanum (with lantern slides) . . . GEO. H. DAY, Louisville

OFFICIAL CALL.

THE SIXTY-FIFTH ANNUAL SESSION OF THE
KENTUCKY STATE MEDICAL ASSOCIATION
TO BE HELD IN LOUISVILLE, SEPTEMBER 20, 21, 22, AND 23, 1915.

To the Officers and Members of the Component County Societies of the Kentucky State Medical Association:

The Sixty-Fifth Annual Session of the Kentucky State Medical Association will convene in the Auditorium of the First Christian (Dr. Powell's) Church, Louisville, Kentucky, on Tuesday, Wednesday and Thursday, September 21, 22 and 23, 1915.

THE HOUSE OF DELEGATES.

The House of Delegates of the Kentucky State Medical Association will convene in the First Christian Church on Monday, September 20, 1915.

FIRST GENERAL SESSION.

The First General Session, which constitutes the opening exercises of the scientific functions of the Association, will be held in the Auditorium of the First Christian (Dr. Powell's) Church, Louisville, Kentucky, at 9 A. M., Tuesday, September 21, 1915.

THE COUNCIL.

The Council will convene in a parlor of the Seelbach Hotel, at 11 A. M., Monday, September 20, 1915.

THE REGISTRATION DEPARTMENT.

The Registration Department will be opened in the Exhibit Hall, on the main floor of the First Christian (Dr. Powell's) Church, from 10 A. M., to 7 P. M., on Monday, September 20, 1915; from 8 A. M. to 7 P. M., Tuesday and Wednesday, September 21 and 22, and from 8 A. M. to 11:30 A. M., on Thursday, September 23rd.

APPORTIONMENT.

Each chartered component county society will be entitled to the number of delegates opposite its name on the following list. Each society is entitled to one delegate for each twenty-five members, or major fraction thereof, whose dues have been paid to the State Association in accordance with the By-Laws:

Adair ..	1	Laurel ..	1
Allen ..	1	Lawrence ..	1
Anderson ..	1	Lee ..	1
Ballard ..	1	Leslie ..	1
Barren ..	1	Letcher ..	1
Bath ..	1	Lewis ..	1
Bell ..	1	Lincoln ..	1
Boone ..	1	Livingston ..	1
Bourbon ..	1	Logan ..	1
Boyd ..	1	Lyon ..	1
Boyle ..	1	McCracken ..	2
Bracken ..	1	McCreary ..	1
Breathitt ..	1	McLean ..	1
Breckinridge ..	1	Madison ..	1
Bullitt ..	1	Marion ..	1
Butler ..	1	Magoffin ..	1
Caldwell ..	1	Marshall ..	1
Calloway ..	1	Martin ..	1
Campbell-Kenton ..	4	Mason ..	1
Carroll ..	1	Meade ..	1
Carlsle ..	1	Menifee ..	1
Carter ..	1	Mercer ..	1
Casey ..	1	Metcalfe ..	1
Christian ..	2	Monroe ..	1
Clay ..	1	Montgomery ..	1
Clinton ..	1	Morgan ..	1
Crittenden ..	1	Muhlenburg ..	1
Cumberland ..	1	Nelson ..	1
Daviess ..	3	Nicholas ..	1
Elliot ..	1	Oldham ..	1
Estill ..	1	Ohio ..	1
Fayette ..	3	Owsley ..	1
Fleming ..	1	Owen ..	1
Floyd ..	1	Pendleton ..	1
Franklin ..	1	Perry ..	1
Fulton ..	1	Pike ..	1
Garrard ..	1	Powell ..	1
Gallatin ..	1	Pulaski ..	1
Grant ..	1	Robertson ..	1
Graves ..	1	Rockcastle ..	1
Grayson ..	1	Rowan ..	1
Green ..	1	Russell ..	1
Greenup ..	1	Scott ..	1
Hancock ..	1	Shelby ..	1
Hardin ..	1	Simpson ..	1
Harlan ..	1	Spencer ..	1
Harrison ..	1	Taylor ..	1
Hart ..	1	Todd ..	1
Henderson ..	2	Trigg ..	1
Henry ..	1	Trimble ..	1
Hickman ..	1	Union ..	1
Hopkins ..	1	Warren ..	2
Jackson ..	1	Washington ..	1
Jessamine ..	1	Wayne ..	1
Jefferson ..	9	Webster ..	1
Johnson ..	1	Whitley ..	1
Knott ..	1	Wolfe ..	1
Knox ..	1	Woodford ..	1
Larue ..	1		

1915 OFFICERS.

DR. JOHN W. MOREN, Louisville, President.	
DR. J. W. KINCAID, Catlettsburg, President-Elect.	
DR. F. G. LARUE, Smithland	} Vice Presidents
DR. C. L. HEATH, Lindsay	
DR. J. C. MOBLEY, Elizabethtown	
DR. W. B. McCLURE, Lexington, Treasurer.	
DR. A. T. McCORMACK, Bowling Green, Secretary.	

COUNCILORS.

DR. E. RAU, Bowling Green, Chairman.
DR. W. W. RICHMOND, Clinton.
DR. CYRUS GRAHAM, Henderson.
DR. C. Z. AUD, Cecilian.
DR. D. S. WILSON, Louisville.
DR. R. C. McCHORD, Lebanon.
DR. A. W. CAIN, Somerset.
DR. J. E. WELLS, Cynthia.
DR. A. S. BRADY, Greenup.
DR. J. A. SHIRLEY, Winchester.
DR. J. S. LOCK, Barbourville.

Representative on Legislative Council, American
Medical Association W. A. POOLE, Henderson
DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

KENTUCKY.

A. H. BARKLEY, Lexington
W. W. RICHMOND Clinton
MILTON BOARD Louisville
A. T. McCORMACK Bowling Green

MEMBERS OF STATE BOARD OF HEALTH.

DR. JOHN G. SOUTH, President	Frankfort
DR. GOR. T. FULLER	Mayfield
DR. C. A. FISH	Frankfort
DR. W. W. RICHMOND	Clinton
DR. I. A. SHIRLEY	Winchester
DR. C. Z. AUD	Cecilian
DR. O. C. ROBERTSON	Owensboro
DR. A. T. McCORMACK, Secretary	Bowling Green
DR. D. P. CURRY, State Sanitary Engineer . .	Bowling Green
DR. W. L. HEIZER, State Registrar of Vital Statistics	Bowling Green
DR. L. H. SOUTH, State Bacteriologist	Bowling Green

PERMANENT COMMITTEES.

SCIENTIFIC WORK—J. W. Kincaid, Chairman; John J. Moren, A. T. McCormack, Secretary.

MEDICO-LEGAL—J. J. Moren, Chairman; W. B. McClure, A. T. McCormack, Secretary.

LEGISLATION AND PUBLIC POLICY—C. Z. Aud, D. M. Griffith and Milton Board.

MEDICAL EDUCATION—W. W. Richmond, D. M. Griffith and C. A. Calvert.

EXPERT TESTIMONY—J. N. McCormack, Curran Pope, J. L. Phythian.

PREVENTABLE DISEASES OF THE EYE—J. A. Stucky, R. L. Collins Wm. Cheatham.

COUNCILOR DISTRICTS.

FIRST DISTRICT.

BALLARD	FULTON	LYON
CALDWELL	GRAVES	MARSHALL
CALLOWAY	HICKMAN	MCCRACKEN
CARLISLE	LIVINGSTON	TRIGG

SECOND DISTRICT.

BRECKINRIDGE	HENDERSON	OHIO
CRITTENDEN	HOPKINS	UNION
DAVISS	MCLEAN	WEBSTER
HANCOCK	MUHLBURG	

THIRD DISTRICT.

ALLEN	CUMBERLAND	WARREN-EDMONSON
BAREN	LOGAN	SIMPSON
BUTLER	METCALFE	TODD
CHRISTIAN	MARION	

FOURTH DISTRICT.

BULLITT	HENRY	SHELBY
GRAYSON	LARUE	OLDHAM
HARDIN	MEADE	NELSON
HART		

FIFTH DISTRICT.

ANDERSON	FRANKLIN	OWEN
BOONE	GALLATIN	SPENCER
CARROLL	JEFFERSON	

SIXTH DISTRICT.

ADAIR	GREEN	TAYLOR
BOYLE	MERCER	WASHINGTON
MARION		

SEVENTH DISTRICT.

CASEY	LINCOLN	RUSSELL
CLINTON	PULASKI	WAYNE
GARRARD	ROCKCASTLE	

EIGHTH DISTRICT.

BOURBON	HARRISON	PENDLETON
BRACKEN	JESSAMINE	ROBERTSON
CAMPB'L-KENT'N	MASON	SCOTT
FLEMING	NICHOLAS	WOODFORD
GRANT		

NINTH DISTRICT.

BOYD	JOHNSON	MAGOFFIN
CARTER	LEWIS	MARTIN
ELLIOTT	LAWRENCE	PIKE
FLOYD		

TENTH DISTRICT.

BATH	LEE	OWSLEY
BREATHITT	LETCHER	PERRY
CLARK	MADISON	POWELL
ESTILL	MENIFEE	ROWAN
FAYETTE	MONTGOMERY	WOLFE
KNOTT		

ELEVENTH DISTRICT.

BELL	JACKSON	LESLIE
CLAY	KNOX	WHITLEY
HARLAN	LAUREL	

CONSTITUTION AND BY-LAWS OF THE KENTUCKY STATE MEDICAL AS- SOCIATION ADOPTED AT PA- DUCAH IN 1902 AS AMENDED.

CONSTITUTION.

ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the Kentucky State Medical Association.

ARTICLE I.—NAME OF THE ASSOCIATION.

The purpose of the Association shall be to federate and bring into one compact organization the entire medical profession of the State of Kentucky, and to unite with similar associations in other states to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION.

Section 1. This Association shall consist of Members, Delegates and Guests.

Sec. 2. MEMBERS. The members of this Association shall be the members of the component county medical societies.

Sec. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component county societies in the House of Delegates of this Association.

Sec. 4. GUESTS. Any distinguished physician not a resident of this State may become a guest during any Annual Session upon invitation of the Association or its Council, and shall be accorded the privileges of participating in all of the scientific work of that Session.

ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall be the legis-

lative and business body of the Association, and shall consist of (1), Delegate elected by the component county societies, and (2) *ex officio*, the officers of the Association as defined in Article VII, Section 1, of this Constitution.

ARTICLE VI.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interest of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VII.—SESSIONS AND MEETINGS.

Section 1. The Association shall hold an Annual Session, during which there shall be held daily not less than two General Meetings, which shall be open to all registered members, delegates and guests.

Sec. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

ARTICLE VIII.—OFFICERS.

Section 1. The officers of this Association shall be a President, three Vice Presidents, a Secretary, a Treasurer, and eleven Councilors.

Sec. 2. The President and Vice Presidents shall be elected for a term of one year. The Secretary, Treasurer and Councilors shall be elected for terms of five years each, the Councilors being divided into classes so that two shall be elected each year. All of these officers shall serve until their successors are elected and installed.

Sec. 3. The Officers of the Association shall be elected by the House of Delegates on the morning of the last day of the Annual Session, but no Delegate shall be eligible to any office named in the preceding section, except that of Councilor, and no person shall be elected to any such office who is not in attendance upon the Annual Session and who has not been a member of the Association for the past two years.

ARTICLE IX.—FUNDS AND EXPENSES.

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publication. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Session, for publication, and for such other purposes as will promote the welfare of the Association and profession.

ARTICLE X.—REFERENDUM.

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members, a majority of such vote shall determine the question and be binding upon the House of Delegates.

ARTICLE XI.—THE SEAL.

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

ARTICLE XII.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

BY-LAWS.

CHAPTER I.—MEMBERSHIP.

Section 1. All members of the Component County Societies shall be privileged to attend all meetings and take part in all of the proceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Association. PROVIDED, that no physician may become a member of any county society unless he signs and keeps inviolate the following pledge;

I hereby promise upon my honor as a gentleman that I will not so long as I am a member of the Kentucky State Medical Association practice division of fees in any form; neither by collecting fees from others referring patients to me; nor by permitting them to collect my fees for me; nor will I make joint fees with physicians or surgeons referring patients to me for operation or consultation; neither will I in any way, directly or indirectly, compensate anyone referring patients to me; nor will I utilize any man as an assistant as a subterfuge for this purpose.

Sec. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a chartered county society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the annual session in the respective bodies of this Association.

Sec. 3. No person who is under sentence of suspension or expulsion from any component society of this Association, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings, until such time as he has been relieved of such disability.

Sec. 4. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right of membership has been verified by reference to the roster of the society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION.

Section 1. The Association shall hold an annual session, meeting every third year in the city of Louisville, and the other two years at some point in the State fixed at the preceding annual session.

Sec. 2. Special sessions of either the Association or House of Delegates shall be called by the President at his discretion or upon petition of twenty delegates.

CHAPTER III.—GENERAL MEETING.

Section 1. The General Meeting shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions; and, except guests, to vote on pending questions. Each General Meeting shall be presided over by the President, or in his absence or disability, or upon his request, by one of the Vice-Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President and the annual orations, and the entire time of the Sessions as far as may be shall be devoted to papers and discussions relating to scientific medicine.

Sec. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

Sec. 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

Sec. 4. No address or paper before the Association, except those of the President and

Orators, shall occupy more than twenty-minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

Sec. 5. All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

CHAPTER IV.—HOUSE OF DELEGATES.

Section 1. The House of Delegates shall meet annually at the time and place of the Annual Session of the Association and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and the annual orations, and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But if the business interests of the Association and profession require, it may meet in advance or remain in session after the final adjournment of the General Meeting.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 25 members, and one for each major fraction thereof, but each county society holding a charter from this Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate. In case the regularly elected delegate is unable to attend the annual meeting of the Association, the President of the county society shall have the power to appoint an alternate, who shall have the rights and privileges of a delegate.

Sec. 3. A majority of the registered delegates shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Association.

Sec. 4. It shall, through its officers, Advisory Council, and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping stone to further ones of higher interest.

Sec. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public-health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county

in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate work in medical centers as well as home study and research and shall endeavor to have the results of the same utilized and intelligently discussed in the county societies. With these ends in view, five years after the adoption of the By-Laws no voluntary paper shall be placed upon the annual program or be heard in the Association which has not first been heard in the county society of which the author is a member.

Sec. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body in such a manner that not more than one-half of the delegates shall be elected in any one year.

Sec. 9. It shall upon application provide and issue charters to county societies organized to conform to the spirit of the Constitution and By-Laws.

Sec. 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies and these societies, when organized and chartered shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

Sec. 11. It may divide the counties of the State into Councilor Districts, and, when the best interests of the Association and profession will be promoted thereby, organize in each district a medical society, to meet midway between the Annual Sessions of the Association, and members of the chartered county societies and none others shall be members in such district societies. When so organized from the Presidents of such district societies shall be chosen the Vice Presidents of this Association, and the Presidents of the county societies of the district shall be the Vice-Presidents of such district societies.

Sec. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates, and such com-

mittees may report to the House of Delegates in person, and may participate in the debate thereon.

Sec. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

Sec. 14. It shall present a summary of its proceedings to the last general meeting of each annual session, and shall publish the same in the Transactions or JOURNAL.

CHAPTER V.—ELECTION OF OFFICERS.

Section 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect, provided, however, that when there are more than two nominees, the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting continue until an election occurs in like manner.

Sec. 2. Any member known to have directly or indirectly solicited votes for or sought any office within the gift of this Association shall be ineligible for any office for two years.

Sec. 3. The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

Sec. 4. Nominations for President shall be called for by counties.

CHAPTER VI.—DUTIES OF OFFICERS.

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and so far as practicable, shall visit by appointment, the various sections of the State and assist the Councilors in building up the county societies and in making their work more practical and useful.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall elect one of the Vice-Presidents to succeed him.

Sec. 3. The Treasurer shall give bond for the trust imposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any estate belonging to the Association, and execute the necessary papers; and shall, in general,

subject to such direction, have the care and management of the fiscal affairs of the Association. He shall pay money out of the Treasury, only on a written order of the President, countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands.

Sec. 4. The Secretary, acting with the Committee on Scientific Work, shall prepare and issue the programs for and attend all meetings of the Association and of the House of Delegates, and he shall keep minutes of their respective proceedings in separate record books. He shall charge upon his books the assessments against each component county society at the end of the fiscal year; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall act as secretary of the Committee on Scientific Work. He shall be editor of the *KENTUCKY MEDICAL JOURNAL*. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient it is desirable that he shall receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII.—COUNCIL.

Section 1. The Council shall hold daily meetings during the annual session of the Association and at such other times as necessity may require, subject to the call of the

Chairman or on petition of three Councilors. It shall meet on the last day of the annual session of the Association for re-organization and for the outlining of the work for the ensuing year. At this meeting it shall elect a Chairman and Secretary and it shall keep a permanent record of its proceedings. It shall, through its Chairman, make an annual report to the House of Delegates at such times as may be provided, which report shall include an audit of the accounts of the Secretary and Treasurer and other agents of this Association, and shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association or under its control, with such suggestions as it may deem necessary. In the event of a vacancy in any office the Council may fill the same until the next annual election.

Sec. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association.

Sec. 2. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor. Its decision in all such cases shall be final.

Sec. 4. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communications shall be officially signed by the chairman and secretary of the Council, as such.

Sec. 5. The Council shall provide for and

superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint such assistants to the editor as it deems necessary. It shall manage and conduct the KENTUCKY MEDICAL JOURNAL, which is the organ of the Association, and all money received by the JOURNAL, the Council or any officer of the Association, shall be paid to the Treasurer of the Association on the first of each month.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers heard before the Association shall be referred to the KENTUCKY MEDICAL JOURNAL for publication. The editor, with the consent of the Councilor for the District in which he resides may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Sec. 7. All commercial exhibits during the annual session shall be within the control and direction of the Council.

CHAPTER VIII.—COMMITTEES.

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Medical Education.

A Medico-Legal Committee.

A Committee on Arrangements, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

Sec. 2. The Committee on Scientific Work shall consist of three members of which the President-elect shall be a member and Chairman, and the Secretary shall be a member and Secretary, and shall determine the character and scope of the scientific proceedings of the Association, subject to the provisions or the instructions of the House of Delegates or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which shall be adhered to by the Association as nearly as practicable.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of the public health and scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the

whole people, and shall utilize every organized influence in local, state and national affairs and elections. Its work shall be done with dignity becoming a great profession and with that wisdom which will make effective its work and influence. It shall have authority to be heard before the entire Association upon questions of great concern at such times as may be arranged during the annual session.

Sec. 4. The Committee on Arrangements shall consist of the component society in the territory in which the annual session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting-places of the Association and of the House of Delegates, and of their respective committees, and shall have general charge of all arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

Sec. 5. The Medico-Legal Committee shall consist of three members, one of whom, the Chairman, shall be elected by the Council for five years, and the Secretary and the Treasurer shall be the other two members *ex officio*. This Committee shall select and fix the compensation for an attorney, who shall act as General Counsel, and, if required, additional local counsel. The Association through this Committee shall defend its members who are in good standing against unjust suits for malpractice.

CHAPTER IX.—ASSESSMENTS AND EXPENDITURES.

Section 1. The assessment of three dollars per capita on the membership of the component societies is hereby made the annual dues of this Association. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, lists of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association on the first day of January in each year.

Sec. 2. Any county society which fails to pay its assessment, or make the reports required, on or before the first day of April in each year, shall be held as suspended, and none of its members, or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Sec. 3. All motions or resolutions appropriating money, shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be ap-

proved by the Council and House of Delegates.

CHAPTER X.—RULES OF CONDUCT.

The principles set forth in the Principles of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI.—RULES OF ORDER.

The deliberations of this Association shall be governed by parliamentary usage, as contained in Robert's Rules of Order, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII.—COUNTY SOCIETIES

Section 1. All county societies now in affiliation with the State Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, upon application to the House of Delegates, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Sec. 3. Charters shall be issued only upon approval of the House of Delegates and shall be signed by the President and Secretary of this Association. The House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be had to the Council, which shall decide what action shall be taken.

Sec. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Association, every reputable and legally registered physician who is practicing, or who will agree to practice, non-sectarian medicine shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the

right to appeal to the Council, which, upon a majority, may permit him to become a member of an adjacent county society.

Sec. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component society moves to another county in this State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Sec. 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do post-graduate and original research work, and to give the society the first benefit of such labors. Official position and other preferences shall be unstintingly given to such members.

Sec. 12. At the time for the annual election of officers each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each twenty-five members or major fraction thereof, and the secretary of the society shall send a list of such delegates to the Secretary of this Association at least sixty days before the annual session.

Sec. 13. The Secretary of each county society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on the first day of January of each year, or as soon

thereafter as possible, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 14. The Secretary of each county society shall report to the KENTUCKY MEDICAL JOURNAL full minutes of each meeting and forward to it all scientific papers and discussions which the Society shall consider worthy of publication.

CHAPTER XIII.—AMENDMENTS.

These By-Laws may be amended by any annual session by a two-thirds vote of all the delegates present at that session, after the amendment has laid upon the table for one day.

REPORT OF THE COUNCIL.

To the House of Delegates:

In accordance with the provisions of the Constitution and By-Laws, we have the honor of submitting this, our annual report:

It is a matter of some congratulation that on the first day of September, 170 more of our members had paid their dues than had done so a year ago. This indicates greater activity by the hard-working secretaries of our good county societies. It does not mean that we have more members, but that we have more members in good standing. The problem of getting the members to pay their dues on January first when they are due, while real, is not our greatest one. Those who pay later, pay exactly the same dues as the ones who pay promptly, but they do not receive the JOURNAL during that period of the year before they pay, are not eligible for protection, by the medico-legal committee, are not eligible for reciprocity with any of the states with which Kentucky reciprocates, cannot be indorsed for appointment as insurance examiners; but after all, the real problem is to have each county society do such work as will cause its membership to be anxious to pay their dues at the proper time. After all the work and all the energy expended for the past fifteen years, we still have many counties whose societies are even yet paper organizations and the individual doctors in these counties are still "pegging along", barely realizing they are members of the profession, without receiving the great value that comes from organization in the attrition of mind against mind at the monthly meeting, and the opportunity of helpfulness that comes from doing real thinking and real work together.

It is a partial pleasure to report that the deficit in the operation of the JOURNAL reported last year is not only entirely wiped out, but that the JOURNAL for this year shows a net profit of \$2,363.32. From this should be deducted \$450.00 paid by the Jefferson County Society in satisfaction of its deficit of \$858.38 for last year, leaving an actual profit of the JOURNAL for the current year of \$1,913.32. It is important for the membership to realize, however, that this profit is in dollars and cents and that it indicates an actual loss in the value of the JOURNAL. Since the March issue we have been deprived of the Jefferson County number, which, while most expensive, was one of the most valuable parts of the work of the Association. The Jefferson County Medical Society is not only much the largest one, furnishing as it does about one-sixth of the total membership in the State, but it meets so regularly, has such a splendid average membership and is scientifically able to conduct its scientific work in such a way as to make it available for the JOURNAL, that the full publication of its proceedings is of the greatest importance. The medical profession of Louisville can look back with becoming pride to the leadership which they have held, not only in State, but in national medical matters, for the past seventy-five years. To maintain this leadership it is essential to them not only that they shall remain abreast of medical progress, but that they shall actually demonstrate to the profession elsewhere that they are worthy of confidence, both personally and as to scientific attainment. It ill becomes such a profession as composes the Jefferson County Medical Society to hide their light under a bushel. Unfortunately, the Association has not such financial means as would enable it to publish the full proceedings of the Jefferson County Society without doing an injustice to the five-sixths of the membership outside of that body. This most important matter is respectfully placed before the House of Delegates for its consideration. It seems clear that some equitable arrangement should be arrived at so that the profession of the State and the profession of Louisville may both have the benefit of the full scientific proceedings of the weekly meetings held in Louisville.

It is interesting to note that the treasurer reports a net cash balance of \$5,983.70 this year as against \$3,486.02 last year. The total assets of the Association on September 1st, 1915 are \$8,140.64 as against \$5,635.80 on the same date last year, showing a net increase of \$2,504.84 for the current year.

Special attention is called to the report of the Medico-Legal Committee, indicating that attorneys' fees, court costs, and all other ex-

penses have amounted during the fiscal year to \$2,074.80, a decrease of \$865.50 from last year. The report of this Committee will indicate the extent of the service rendered. From a careful survey of the suits of the eighty-three cases which have been brought since the establishment of this Committee, the Council is of the opinion that the expenses of these suits, every one of them unjust and most of them mere blackmail, would have been five or ten times as much under the old haphazard way where they were defended by the individual doctor without assistance from an expert central office. We expected the expense to increase this year, and congratulate the Medico-Legal Committee upon the excellent services which it has rendered at a decreased cost to the Association. The Medico-Legal Committee was established in 1909. Its income and expenses for each year since its establishment is shown in the following tables indicating that it has practically been self-sustaining:

	Income.	Expense.
1909-1910	\$ 592.00	\$ 428.95
1910-1911	971.00	450.00
1911-1912	942.00	819.15
1912-1913	1,742.00	1,260.40
1913-1914	1,691.00	2,940.30
1914-1915	2,014.00	2,074.80
	<hr/> \$7,852.00	<hr/> \$7,973.60

The experience of the Medico-Legal Committee has been of the utmost value to the profession. The individual members must understand the increased danger of malpractice suits and govern themselves accordingly. In every instance, now, as always, a patient should be told the exact truth in regard to possible dangers and complications from the condition from which the patient suffers, and a reliable and competent consultant should be called in every doubtful case. Before the establishment of the Medico-Legal Committee it had been commonly supposed that most malpractice suits were brought against surgeons and other specialists. On the contrary it has been found during the past six years that more than ninety-five per cent of the suits have been brought against general practitioners in the country or small towns.

The Council cordially commends the activity, wisdom, economy, and general effectiveness which has been shown by the Medico-Legal Committee and our counsel in the conduct of the important matters coming under their jurisdiction.

The net profit of \$1,913.32 for the JOURNAL for the current year is a matter of considerable pride, we feel sure, to the entire membership. Sometimes we believe every doctor in Kentucky realizes the value of the JOURNAL

to our membership and we feel sure that we have demonstrated that a medical journal may be conducted honestly and at the same time profitably. We have tried to keep constantly before our membership, and the income of the JOURNAL indicates that in this we have been successful, that this remarkable showing can not be continued without an even more effective support of our advertisers in the future, by the profession of the State. This statement is repeated from our report of last year, for the sake of additional emphasis. It is not a square deal for our members who are the owners of the JOURNAL and who get all the good there is in it, not to give our advertisers at least an equal opportunity. When one is purchasing something, he is urged to at least write to the advertisers in the JOURNAL and if he cannot give the best quality and the best price, that is his fault and not ours, but it is certainly up to us to give him an opportunity to do business with us, if he helps us to run a creditable JOURNAL. The importance of this to the individual member is emphasized by the fact that, after careful investigation, the Council is so sure that there is not a single firm among our advertisers which is not worthy of patronage, we stand ready to make good any money lost by one of our members, occasioned by a misstatement from any of our advertisers. So far as we know, no other medical or any other publication has ever made this practical guarantee of its advertisers. We accept no dishonest advertisers in our JOURNAL, and after five years' experience, we feel confident that our methods are perfected to a point where we will not be deceived, and are willing to relieve our members of risk in dealing with our advertisers and our advertisers products. If all of our members will adopt a plan already in force in many societies, of not only preferring those manufacturers and sanitariums which make their announcements through our own JOURNAL, but of calling the attention of all those who seek the patronage of the profession to the fact, we will not only have no difficulty in furnishing our members with a satisfactory organ, but within a few years we can develop a sufficient reserve fund to undertake the protection of aged physicians, and such other things as have been the dreams of our profession.

At the meeting of the Council in Newport last year, the contract for printing the JOURNAL was let to the Times-Journal Publishing Company, incorporated, for two years on the following contract:

This contract made and entered into by the Kentucky State Medical Association, incorporated, party of the first part, and the Times-Journal Publishing Company, incor-

porated, party of the second part, witnesseth:

That the party of the second part hereby agrees to publish for party of the first part the KENTUCKY MEDICAL JOURNAL on the paper of the quality furnished, the body of the JOURNAL to be printed in 10 point DeVinne type, the discussions and similar matter to be in 8 point DeVinne type, not more than one-third of each issue to be advertising matter, set by hand, each Jefferson County issue to consist of 48 pages, 2,500 copies in consideration of the sum of \$160.00 per month; and each regular issue to consist of sixty-four pages, 2,500 copies, in consideration of the sum of \$200.00 per month, or eighty pages, 2,500 copies, in consideration of the sum of \$250.00, or of ninety-six pages, 2,500 copies, in consideration of \$300.00 per month. It is further agreed that the party of the second part agrees that the JOURNAL shall be mailed to the members before midnight on the 26th day of the month preceding issue, subject to a penalty of ten dollars (\$10) for each twenty-four hours, or fraction thereof delay.

It is further agreed that one-third of the copy of the Jefferson County number shall be in the hands of the printer on the 26th day of the month preceding issue, one third on the 1st day of the month of issue, and the remaining one-third on the 5th day of the month of issue; the advertising forms to close on the 1st day of the month of issue.

It is further agreed that one-third of the copy for the regular number shall be in the hands of the printer on the 5th day of the month before issue, one-third on the 10th and one-third on the 16th day of the month before issue.

It is further agreed that the copy shall be correct, and the party of the second part agrees to pay twenty-five (25) cents for each typographical error not contained in the copy, galley proofs and page proofs are to be submitted to the editor, and it is agreed that it shall be read and returned within twenty-four hours after its submission.

It is further agreed that the second party shall furnish envelopes, the return card to be printed on same at the rate of \$1.00 per thousand which shall be addressed by the first party, and the JOURNAL shall be put in envelopes and mailed by the second party.

It is further agreed that this contract is to be continued for two years, beginning this, December 1st, 1914.

Witness our hands and seals this day and date above named.

KENTUCKY STATE MEDICAL ASSOCIATION (Inc.)

By E. RAU, Chairman Council.

TIMES-JOURNAL PUBLISHING COMPANY, (Inc.)

By W. J. DENHARDT, Manager.

We have had the reports of the Secretary

and Treasurer audited by Mr. B. P. Eubank, Public Accountant, of Bowling Green, Kentucky, and submit his report herewith.

It will be noted again this year, as for the past seven years, that each item of expense and income are set forth so plainly, that not only every county society and its Delegates, but every member of the Association may know the details of our business affairs which are of interest and importance to every one of us. The Council and your officers will continue to work with the most careful attention to its every detail. It is to be remembered at all times that we are entirely under the control and direction of the members of the county societies through their duly elected delegates. If anything is being done wrong, if there is any way of improving it, if newer methods or better management will more nearly accomplish the purpose of this Association, we beg that it be submitted to the House of Delegates for its action at this session so that in the future conduct of the affairs of this Association we may best promote the purpose set forth in its Constitution and charter "to federate and bring into one compact organization the entire medical profession of the State of Kentucky, and to unite with similar associations in other states to form the American Medical Association with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of diseases, and in prolonging and adding comfort to life."

Respectfully submitted,

ERNEST RAU, Chairman.

A Simple Prophylaxis Against Lousiness.—

Eyesell recalls the old observation that workmen in sulphur mines escape malaria. It is now easy to see that mosquitoes could not exist in the presence of sulphur vapor which contains more or less hydrogen sulphide. The author now proceeded to dust precipitated sulphur over all body linen and underwear. Garments were reversed and the sulphur brushed in with special reference to seams, etc. As thus applied the sulphur is presumably inert, but when the garments are worn the perspiration activates the sulphur. The latter is also efficacious against bedbugs, fleas, stinging diptera and other vermin.—Muench. Med. Woch.

AUDITOR'S REPORT.

To the Council, Kentucky State Medical Association:

GENTLEMEN: At the requests of Dr. Ernest Rau, I have audited the books of your Association, both of W. B. McClure, Treasurer, and A. T. McCormack, Secretary, from September 1, 1914, to August 6, 1915.

Cash balance in Second National Bank, Lexington, Kentucky	\$6,832.06
February, 1915 Interest on Bond, collected by Secretary and mailed to Dr McClure, Treasurer (in transit)....	30.00
	<u>\$6,862.06</u>
Less outstanding checks, viz:	
Voucher No. 90 Sampson & Sampson, Attorneys	125.00
Voucher No. 11, A. T. McCormack ..	125.00
Voucher 112, L. H. South	40.00
Voucher No. 113, Clyde W. Howell..	75.00
Voucher No. 114, W. C. Morris, P. M.	128.96
Voucher No. 115, James E. Fahey, Official Stenographer	5.00
Voucher No. 116, Times Journal Publishing Co.	249.00
Voucher No. 117, A. T. McCormack..	125.00
Voucher No. 118, L. H. South	40.00
Voucher No. 119, Clyde W. Howell..	75.00
Voucher No. 119, Clyde W. Howell...	75.00
	<u>878.36</u>
Net Cash Balance agreeing with Secretary	\$5,983.70
First Mortgage Real Estate Bond ..	1,000.00
Office Furniture, Stationery, etc (Exhibit "D")	<u>1,156.94</u>
Total	<u>\$8,140.64</u>

I have compared all entries on Cash Book with Ledger entries and checked vouchers paid with Secretary's stubs and found same correct.

The books are in perfect balance and correctly kept. The Exhibits herewith submitted

give a full and complete statement of the business of the past fiscal year.

Respectfully,
B. P. EUBANK, Accountant.

EXHIBIT "A".

RECEIPTS.

Dues from County Societies and subscriptions to JOURNAL	\$6,147.45
Income of JOURNAL, advertising, etc.	6,377.11
Total	\$12,524.56
Income from Investment, viz:	
Interest on Bond February 23, 1914 to August 23, 1914	29.90
Interest on Bond August 23, 1914 to February 23, 1915	30.00
Interest on Deposit	45.00
	<u>104.90</u>
Total receipts for the year....	<u>\$12,629.46</u>
Balance on hand September 1, 1914	3,486.02
	<u>\$16,115.48</u>

DISBURSEMENTS.

State Medical Association:	
Secretary's Salary	\$1,500.00
Secretary's Stenographer	900.00
Secretary's Sundries	17.00
Secretary's Printing, other than the JOURNAL	31.50
Treasurer's Office Expense and Bond	44.05
Officers, Council and Committee Expenses	148.29
Costs and Expenses—Medico-Legal Committee	449.80
Medico-Legal Committee, Attorney's fees	1,625.00
Association Sundries	26.63
Newport meeting expenses	822.04
Louisville meeting	29.10
Stamps and Envelopes	298.88
JOURNAL expense:	
Business Manager	\$ 480.00
Commission on advertisements....	41.21
Printing JOURNAL	3,353.50
Freight and Drayage	5.47
Postage	133.61
Sundries	135.20
Microscopist's Salary	90.50
	<u>\$10,131.78</u>
Cash on hand September 1, 1915	5,983.70
	<u>\$16,115.48</u>

EXHIBIT "B".

Detailed Statement of Disbursements of W. B. McClure, Treasurer, Kentucky State Medical Association, each made on a Voucher Check signed by Dr. John J. Moren President, A. T. McCormack, Secretary, and himself, from September 1, 1914, to September 1, 1915.

1914

September 2, VOUCHER CHECK No. 1	\$ 70.00
MRS. BELLI GALLOWAY, Official Stenographer, Bowling Green.	
To reporting trial in case of Drs. Blackburn & Francis vs. J. J. Miller and wife, 3 day sat \$5.00 a day	\$15.00
To copying testimony of Drs. Blackburn, W. A. Guthrie, and Mrs. Annie Miller, 120 pages at .25	30.00
To reporting trial second time, 3 days at \$5.00 per day	15.00
To copying testimony of Drs. Bryan, Francis and Medis, 40 pages at .25 ..	10.00
September 9, VOUCHER CHECK No. 2	\$ 27.44
W. C. MORRIS, Postmaster, Bowling Green.	
To 4000 two cent stamped envelopes, office use	\$84.96
To 2000 two cent stamped envelopes, Newport meeting	42.48
October 1, VOUCHER CHECK No. 3	\$160.05
DR. A. T. MCCORMACK, Bowling Green.	
To postage August 1st and 15th JOURNALS	\$ 12.32
To postage September 1st and 15th JOURNAL	10.73
To Hotel Blue Grass Inn—Newport meeting	12.00
To September Salary	125.00
Salary fixed by House of Delegates—Newport 1914.	
October 1, VOUCHER CHECK No. 4	\$ 60.00
DR. L. H. SOUTH, Bowling Green.	
To September salary as Business Manager of the Regular JOURNAL	\$40.00
To Hotel and meals Blue Grass Inn Newport	19.06
To baggage	1.00
Approved by Council and ordered paid by House of Delegates.	

October 1, VOUCHER CHECK No. 5	\$ 25.00
MARY F. SHEA, Bowling Green. To salary for September as Microscopist.	
October 1, VOUCHER CHECK No. 6	\$ 94.70
CLYDE W. HOWELL, Bowling Green. To Room Blue Grass Inn	\$ 8.00
To Meals Blue Grass Inn	8.20
To Incidentals (baggage, etc)	3.50
To September salary. Stenographer	75.00
Approved by Council and ordered paid by House of Delegates.	
October 1, VOUCHER CHECK No. 7	\$391.20
TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green. To 2250 32-page September 1st Jefferson County JOURNAL	\$105.00
By 1 day's delay	\$10.00
By 11 type errors in same	2.75
To making changes and resetting ad	2.80
To 2250 envelopes	2.25
To 3000 24-lb. linen letter heads	10.00
To 2500 80-page Regular JOURNALS, September 15th issue	250.00
By 1 day's delay	10.00
By 37 type errors in same	9.25
To 2500 envelopes	2.50
To difference in setting tabular matter	19.60
Embossing badges for Newport meeting	7.00
To 18 changes	3.60
To putting in inserts	2.45
To 1000 registration cards	3.50
To 500 programs	14.50
October 1, VOUCHER CHECK No. 8	\$ 50.00
DR. M. L. WATSON, Summershade. To Attorneys fee paid Scott & Compton in case of J. A. Oliver, Metcalfe Circuit Court.	
October 1, VOUCHER CHECK No. 9	\$ 59.00
DR. E. E. PALMORE, Strode. To Attorneys fee paid Scott & Compton in case of Oliver vs. Watson, in Metcalfe County Circuit Court.	
October 1, VOUCHER CHECK No. 10	\$ 7.85
LOUIS SUMMERS Clerk, Louisville. To Defendant's costs in Ida M. Maher vs. Cuthbert Thompson case. Jefferson County Circuit Court.	
October 1, VOUCHER CHECK No. 11	\$ 35.00
AMERICAN MEDICAL ASSOCIATION, Chicago. To 2500 supplements KENTUCKY MEDICAL JOURNAL (President's picture) for State meeting September 15th issue. Approved by the Council and ordered paid by the House of Delegates.	
October 1, VOUCHER CHECK No. 12	\$ 95.00
S. W. BASSETT COMPANY, Providence, R. I. To 500 gold plate "Newport 1914" bars at .19 each. Approved by the Council and ordered paid by the House of Delegates	
October 1, VOUCHER CHECK No. 13	\$ 40.00
W. A. POOLE, Henderson. To expenses attending Tenth Annual Conference on Medical Legislation at Chicago, February 23, 1914. Time spent in service and travel—4 days. Approved by the Council and ordered paid by the House of Delegates.	
October 1, VOUCHER CHECK No. 14	\$ 14.10
DR. DUNNING S. WILSON, Louisville. To expenses to Frankfort and return for self and stenographer as Councilor for Fifth District. Approved by the Council and ordered paid by the House of Delegates.	
October 1, VOUCHER CHECK No. 15	\$ 1.00
MESSRS. YOUNG & CARL, Cincinnati. To panorama photograph of Kentucky State Medical Association at Newport. Approved by the Council and ordered paid by the House of Delegates.	
October 1, VOUCHER CHECK No. 16	\$ 9.00
WILLIAM HAVEN, Newport. To carpenter 8 hours for exhibits and stereopticon at Newport meeting. Approved by the Council and ordered paid by the House of Delegates.	
October 1, VOUCHER CHECK No. 17	\$ 7.50
REIS CARPET CLEANING WORKS, Newport. To 60 tables rented four days for Newport meeting. Approved by Council and ordered paid by the House of Delegates.	
October 1, VOUCHER CHECK No. 18	\$ 10.50
THE FISHER BROTHERS COMPANY, Covington. To Electrician's time 10 1-2 hours wiring for stereopticon, lights for exhibit at Blue Grass Inn	\$ 10.50
October 1, VOUCHER CHECK No. 19	\$ 12.00
THE FORDYCE-MILLS COMPANY, Southgate. To Harry Van—night watchman	\$ 6.00
To John Helms—night watchman	2.00
To lumber of various kinds used about the place for exhibits, etc.	4.00
Approved by the Council and ordered paid by the House of Delegates.	
October 1, VOUCHER CHECK No. 20	\$100.00
DR. R. LEE BIRD, Latonia. To hall rent at Blue Grass Inn for Newport meeting—paid by Campbell-Kenton Medical Society in advance. Approved by the Council and ordered paid by the House of Delegates.	
October 1, VOUCHER CHECK No. 21	\$ 12.60
DR. R. C. MCHORD, Lebanon. To expenses as Councilor for Sixth District for 1914. Approved by the Council and ordered paid by the House of Delegates.	
October 1, VOUCHER CHECK No. 22	\$ 7.25
DR. I. A. SHIRLEY, Winchester. To expenses as Councilor Tenth District for 1914. Approved by the Council and ordered paid by the House of Delegates.	

October 1, VOUCHER CHECK No. 23	\$ 23.00	
DR. W. B. McCLURE, Lexington.		
To expenses attending Newport meeting.		
Approved by the Council and ordered paid by the House of Delegates.		
October 1, VOUCHER CHECK No. 24	\$ 4.80	
DR. JOHN J. MOREN Louisville.		
To 185 stamps	\$ 3.70	
To telephone calls	1.10	
Approved by the Council and ordered paid by the House of Delegates.		
October 1, VOUCHER CHECK No. 25	\$ 24.80	
MISS MAYME SULLIVAN, Bowling Green.		
To room at Blue Grass Inn—State Meeting	\$ 8.00	
To meals at Blue Grass Inn—State Meeting	9.70	
To Pullman	2.60	
To baggage	\$ 4.50	
Approved by the Council and ordered paid by the House of Delegates.		
November 1, VOUCHER CHECK No. 26	\$139.06	
DR. A. T. McCORMACK, Bowling Green.		
To postage for October 1st and 15th JOURNAL	\$ 14.06	
To October salary	125.00	
November 1, VOUCHER CHECK No. 27	\$ 40.00	
DR. L. H. SOUTH, Bowling Green.		
To October salary as Business Manager.		
November 1, VOUCHER CHECK No. 28	\$ 25.00	
MARY F. SIEA, Bowling Green.		
To October salary as Microscopist.		
November 1, VOUCHER CHECK No. 29	\$ 75.00	
CLYDE W. HOWELL, Bowling Green.		
To October salary as Stenographer.		
November 1, VOUCHER CHECK No. 30	\$ 60.15	
DR. M. L. WATSON, Summershade.		
To Circuit Clerk's cost	\$ 11.90	
To Jury fee	4.00	
To taxed Attorney's fee	2.50	
To W. E. Young, Sheriff Metcalfe County	9.25	
To Sheriff Barren County .....	.25	
To Sheriff Mouree County .....	.25	
To Geo. W. Estes, witness 1 day	1.00	
To G. M. Depew, witness 2 days	2.00	
To I. A. Oliver, witness 2 days	2.00	
To Mr. I. A. Oliver, witness 2 days	2.00	
To Herman Emberton, witness 2 days	2.00	
To John Emberton, witness 3 days	3.00	
To John Crews, witness 3 days	3.00	
To Lucy Crews, witness 3 days	3.00	
To Jim Fansler, witness 3 days	3.00	
To Tom Fansler, witness 2 days	2.00	
To Henry Hurt, witness 3 days	3.00	
To Wolforde Goode, witness 2 days	2.00	
To Tom Goode, witness 2 days	2.00	
To S. S. Harvey, witness 2 days	2.00	
(Costs in case of Elmore vs. Watson & Palmore.)		
November 1, VOUCHER CHECK No. 31	\$ 3.80	
LOUIS SUMMERS, Clerk Jefferson Circuit Court, Louisville.		
To Clerk's fee in case of Marie Davis vs. Southern Optical Company.		
November 1, VOUCHER CHECK No. 32	\$ 20.34	
DR. CYRUS GRAHAM, Henderson.		
To expenses for year 1914 as Councilor for Second District.		
Approved by the Council and ordered paid by the House of Delegates.		
November 1, VOUCHER CHECK No. 33	\$ 12.20	
DR. D. M. GRIFFITH, Owensboro.		
To expenses to Frankfort during Legislature—February 18, 1914.		
Approved by the Council and ordered paid by the House of Delegates.		
November 1, VOUCHER CHECK No. 34	\$282.50	
WILLIAM WHITFORD, Medical Reporter, Chicago.		
To reporting four days and one evening	45.00	
To railroad expenses to Newport and return	16.00	
To typewritten transcript of 886 folios at .25 per folio	221.50	
November 1, VOUCHER CHECK No. 35	\$646.37	
TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green.		
To 500 Linen letter heads and envelopes Councilor First District	\$ 4.00	
To 500 Linen letter heads and envelopes President-Elect	4.00	
To 500 Linen letter heads and envelopes Chairman Council	4.00	
To 500 Linen letter heads and envelopes Councilor Second District	4.00	
To 500 Linen letter heads and envelopes Councilor Seventh District	4.00	
To 500 Linen letter heads and envelopes President	4.00	
To 500 Linen letter heads and envelopes Councilor Tenth District	4.00	
To 500 Linen letter heads and envelopes Councilor Eleventh District	4.00	
To 500 Linen letter heads and envelopes First Vice President	4.00	
To 500 Linen letter heads and envelopes Second Vice President	3.00	
To 500 Linen letter heads and envelopes Third Vice President	3.25	
To 500 Linen letter heads and envelopes Treasurer	6.00	
To 500 Linen letter heads and envelopes Councilor Eighth District	4.00	
To 500 Linen letter heads and envelopes Councilor Ninth District	4.00	
To 5000 letter heads for Secretary	15.00	
To express on stationary to the above	3.72	
To 2300 64-page October 1st JOURNALS (regular)	190.00	
By 26 errors in same		6.50
To 2300 envelopes	2.30	
To 12 changes	2.40	
To 2300 48-page October 15th JOURNALS (Jefferson)	150.00	
By 18 errors in same		4.50
To 2300 envelopes	2.30	
To changes	4.00	
To 2400 80-page November 1st JOURNAL (regular)	237.50	
By 42 errors in same		10.50
To 2400 envelopes	2.40	
To 10 changes	2.00	

November 1, VOUCHER CHECK No. 36	FRED FORCHT, JR., Attorney, Louisville. To legal services rendered from January 1, 1914 to July 1st, 1915.	\$150.00
December 1, VOUCHER CHECK No. 37	DR. A. T. McCORMACK, Bowling Green. To postage on November 1st JOURNAL \$ 8.51 To postage on November 15th JOURNAL 5.75 To November Salary 125.00	\$139.26
December 1, VOUCHER CHECK No. 38	DR. L. H. SOUTH, Bowling Green. To November salary as Business Manager for JOURNAL.	\$ 40.00
December 1, VOUCHER CHECK No. 39	MARY F. SHEA, Bowling Green. To November salary as Microscopist.	\$ 25.00
December 1, VOUCHER CHECK No. 40	CLYDE W. HOWELL, Bowling Green. To November salary as Stenographer.	\$ 75.00
December 1, VOUCHER CHECK No. 41	THE BOOK SHOP BINDERY, Chicago. To binding KENTUCKY MEDICAL JOURNALS for 11 years (from 1903 to 1913, at \$1.25 each)	\$ 13.75
December 1, VOUCHER CHECK No. 42	GEO. R. MAYO, Public Accountant, Bowling Green. To auditing books for year 1914. Approved by the Council and ordered paid by the Huse of Delegates.	\$ 40.00
December 1, VOUCHER CHECK No. 43	BLUE GRASS INN, Southgate. To electricity used during Newport meeting.	\$ 12.56
December 1, VOUCHER CHECK No. 44	MESSRS. HINES & HAGERMAN, Bowling Green. To premium \$5000 bond of W. B. McClure as Treasurer with American Surety Company, No. 8803.	\$ 20.00
December 1, VOUCHER CHECK No. 45	UNIVERSITY BOOK STORE, Lexington. To 250 envelopes \$ 2.50 To 3 packages envelopes ..... .30 To Bills and printing 1.75 To 1000 envelopes 7.00 To 750 sheets paper 6.50	\$ 18.05
December 1, VOUCHER CHECK No. 46	CLARENCE E. WALKER, Public Stenographer, Louisville. To copy of Dr. Chas. A. Edelin in Shelbourne vs. Bloch \$ 1.80 To Depo. of Ida Bueren 26 pages 10.40	\$ 12.20
December 1, VOUCHER CHECK No. 47	McLEAN & BOONE, Public Stenographers, Louisville. To reporting case of Ida M. Bueren vs. Dr. C. Thompson in Jefferson County Court Com. Branch, 2nd Division, March 24-25, 1914. Two days at \$5.00.	\$ 10.00
December 1, VOUCHER CHECK No. 48	MESSRS. TYE & POPE, Attorneys, Williamsburg. To attorneys' fee in case of Dr. W. M. Bryant, Carpenter, Ky.	\$ 80.00
December 1, VOUCHER CHECK No. 49	TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green. To error in last month's account \$ 5.00 To 2300 48-page November 15th JOURNALS 152.50 By 18 type errors in same 4.50 To 2300 envelopes 2.30 To 8 changes 1.60 To 2400 80-page December 1st JOURNALS 245.00 By 17 errors in same 4.25 To change in make up 2.30 To 2400 envelopes 2.40 To 9 changes 1.80 To 4 half-tones for University of Louisville 4.25 To balance on express sending out stationary 1.75	\$410.15
January 1, VOUCHER CHECK No. 50	DR. A. T. McCORMACK, Bowling Green. To December salary.	\$125.00
January 1, VOUCHER CHECK No. 51	DR. L. H. SOUTH, Bowling Green. To December salary as Business Manager.	\$ 40.00
January 1, VOUCHER CHECK No. 52	MARY F. SHEA, Bowling Green. To salary for December to the 17th as Microscopist.	\$ 15.00
January 1, VOUCHER CHECK No. 53	CLYDE W. HOWELL, Bowling Green. To December salary as Stenographer.	\$ 75.00
January 1, VOUCHER CHECK No. 54	TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green. To 2400 48-page Jefferson County December 15th JOURNALS \$157.50 By 11 errors in same 2.75 To 2400 envelopes 2.40 To 11 changes 2.20 To 2400 80-page January 1st, 1915, JOURNALS 245.00 By 4 days' delay 40.00 To 41 errors in same 10.25 To 2400 envelopes 2.40 To 8 changes in same 1.60 To difference setting index in 6pt type 8.40	\$366.50
February 1, VOUCHER CHECK No. 55	DR. A. T. McCORMACK, Bowling Green. To postage on December 1st and 15th JOURNALS \$ 15.03 To postage on January 1st and 15th JOURNALS 15.79 To January salary as Secretary 125.00	\$155.82
February 1, VOUCHER CHECK No. 56	DR. L. H. SOUTH, Bowling Green. To January salary as Business Manager of JOURNAL.	\$ 40.00

February 1, VOUCHER CHECK No. 57	CLYDE W. HOWELL, Bowling Green. To January salary as Stenographer.	\$ 75.00
February 1, VOUCHER CHECK No. 58	SAMPSON & SAMPSON, Attorneys, Middlesboro. To our half of expense in securing evidence in suit against Dr. Arthur Jenkins.	\$ 5.00
February 1, VOUCHER CHECK No. 59	HON. FRED FORCHT, JR., Louisville. To legal services from July, 1914, to January, 1915.	\$150.00
February 1, VOUCHER CHECK No. 60	DR. PEYTON LIGON, Henderson. To deposition of Mrs. Rena Adkins taken in case of Amos Allen vs. Dr. Peyton Ligon	\$ 22.45
	To expense in Court of Appeals suit of Allen vs. Dr. Peyton Ligon	\$ 3.00 19.45
February 1, VOUCHER CHECK No. 61	D. C. BRENNER & COMPANY, Louisville. To fac simile for Dr. Moren.	\$ 1.75
February 1, VOUCHER CHECK No. 62	TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green. To 2300 January 15th 48-page Jefferson County Number	\$150.00
	By 14 type errors in same	3.50
	To 9 changes	1.80
	To 2300 envelopes	2.20
	To 2400 February 1st 80-page Regular Issue	245.00
	By 81 errors in same	20.25
	To 2400 envelopes	2.40
	To 12 changes	2.40
	To 1400 24-lb linen letter heads and envelopes. (for Dr. Moren's letter to non-members.)	3.75
	To express on same	.80
	To 2000 bill heads	4.50
March 1, VOUCHER CHECK No. 63	DR. A. T. McCORMACK, Bowling Green. To postage on February 1st and March JOURNALS	\$ 13.76 125.00
	To February salary as Secretary	
March 1, VOUCHER CHECK No. 64	DR. L. H. SOUTH, Bowling Green. To February salary as Business Manager.	\$ 40.00
March 1, VOUCHER CHECK No. 65	CLYDE W. HOWELL, Bowling Green. To February salary as Stenographer.	\$ 75.00
March 1, VOUCHER CHECK No. 66	DR. JOHN J. MOREN, Louisville. To stamps for sending out circular letter to non-members.	\$ 22.00
March 1, VOUCHER CHECK No. 67	J. K. AVERY, Louisville. To fee taking depositions of G. G. Rutherford 14 pages	\$ 5.60
	To fee paid for service of notice and subpoena, (suit of G. G. Rutherford vs. D. Y. Roberts)	.50
March 1, VOUCHER CHECK No. 68	HON. WEBSTER HELM, Newport. To legal services rendered in regard Dr. Aug. Helmbold.	\$ 20.00
March 1, VOUCHER CHECK No. 69	TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green. To 2400 64-page March 1st JOURNALS	\$197.50
	By 15 errors in same	4.50
	To 2400 envelopes	2.40
	To change in make-up and 12 changes	4.15
	To cut for Dr. Freeman's paper	.55
April 1 VOUCHER CHECK No. 70	SIMS, RODES & SIMS, Bowling Green. To fee in case of Mrs. Annie Miller vs. Drs. J. H. Blackburn and C. E. Francis, which includes services in Warren County Court.	\$200.00
April 1, VOUCHER CHECK No. 71	MRS. BELLE GALLOWAY, Bowling Green. To copying testimony of Mrs. Annie Miller (23 pages). To copying testimony of Dr. Abell (20 pages) To copying testimony of Mrs. Maggie Whalin (21 pages) Total 64 pages at .25 each	\$ 31.00 \$ 16.00
	To reporting trials 3 days at \$5.00 per day February 22, 23, and 24th in above styled case	15.00
April 6, VOUCHER CHECK No. 72	DR. A. T. McCORMACK, Bowling Green. To postage on April 1st JOURNAL	\$135.97 \$ 10.97
	To March salary as Secretary	125.00
April 6, VOUCHER CHECK No. 73	CLYDE W. HOWELL, Bowling Green. To March salary as Stenographer.	\$ 75.00
April 6, VOUCHER CHECK No. 74	DR. L. H. SOUTH, Bowling Green. To March salary as Business Manager of JOURNAL.	\$ 40.00
April 6, VOUCHER CHECK No. 75	MESSRS. W. J. & J. G. DENHARDT, Bowling Green. To 15 per cent. com. on Renewals Jefferson County JOURNAL \$138.22	\$ 20.73
	To 25 per cent. com. on New Ads Jefferson County JOURNAL 33.94	8.48
	To 15 per cent. com. Renewals Regular JOURNAL 80.00	12.00
	(Vanderbilt \$30 Cumberland Tel. \$50.)	
April 6, VOUCHER CHECK No. 76	BOOK SHOP BINDERY, Chicago. To binding KENTUCKY MEDICAL JOURNALS for 1914.	\$ 1.25
April 6, VOUCHER CHECK No. 77	CHAS. A. MUNKLE, Bowling Green. To 1 cash book.	\$ 4.00

April 6, VOUCHER CHECK No. 78	\$ 84.96
W. C. MORRIS, Postmaster, Bowling Green.	
To 4000 two cent stamped envelopes.	
April 6, VOUCHER CHECK No. 79	\$250.15
TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green.	
To 2500 80-page April 1st JOURNALS	\$250.00
By 27 errors in same	6.75
To 2500 envelopes	2.50
To 22 changes	4.40
April 6, VOUCHER CHECK No. 80	\$108.76
ANNIE LAURIE HARDESTY, Stenographer, Henderson.	
To taking evidence trial of Amos Allen vs. Dr. Ligon, Sept. 1914 term of court—3 days at \$5.00 per day	\$ 15.00
Transcribing above evidence 237 pages at .15 per M. words	81.91
To carbon copy 237 pages at five cents per page	11.85
April 6, VOUCHER CHECK No. 81	\$ 1.50
CLARENCE E. WALKER, Stenographer, Louisville.	
To carbon copy of depositions of Mrs. Brizon, taken December 15, 1914 in case of Shelbourne vs. Bloeh.	
April 6, VOUCHER CHECK No. 82	\$200.00
HON. FRED FORCHT, JR., Louisville.	
To attorney's fee in ease of G. G. Rutherford vs. Dr. D. Y. Roberts—services rendered in trial of case.	
April 6, VOUCHER CHECK No. 83	\$ 54.19
DR. PEYTON LIGON, Henderson.	
To witness fee paid B. W. Hardwieh, 4 days at \$1.00	\$ 4.00
To account paid Clay & Clay for taxes on appeal in case of Allen vs. Ligon	2.00
To postage on same	1.24
Clerk's cost due by defendant	11.95
To transcript for Court of Appeals	35.00
May 1, VOUCHER CHECK No. 84	\$ 3.00
DR. M. L. GARVIN, Horse Cave.	
To returned dues sent to State Secretary instead of county secretary by error.	
May 1, VOUCHER CHECK No. 85	\$133.48
DR. A. T. McCORMACK, Bowling Green.	
To postage on May 1st JOURNAL	\$ 8.48
To salary for April as Secretary	125.00
May 1, VOUCHER CHECK No. 86	\$ 40.00
DR. L. H. SOUTH, Bowling Green.	
To salary for April.	
May 1, VOUCHER CHECK No. 87	\$ 75.00
CLYDE W. HOWELL, Bowling Green.	
To salary for April. Stenographer.	
May 1, VOUCHER CHECK No. 88	\$.50
DR. WRIGHT CLARKSON, Hardy.	
To overpayment of State dues for 1915.	
May 1, VOUCHER CHECK No. 89	\$ 5.00
JAMES E. FAHEY, Louisville.	
To taking testimony in ease of G. G. Rutherford vs. D. Y. Roberts.	
May 1, VOUCHER CHECK No. 90	\$ 15.00
MESSRS. SAMPSON & SAMPSON, Attorneys.	
To defray expenses in obtaining witnesses in ease of Dawn vs. Dr. Arthur Jenkins.	
May 1, VOUCHER CHECK No. 91	\$150.00
MESSRS. ROBBINS & ROBBINS, Attorneys, Mayfield.	
To attorneys' fee in case of Stanley Smith, etc., vs. Dr. W. S. Hargrove—Graves County Circuit Court.	
May 1, VOUCHER CHECK No. 92	\$227.55
TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green.	
To 2000 May 1st 80-page JOURNALS	\$225.00
To 2000 envelopes	2.00
To 19 changes	3.80
By 41 errors in same	3.25
June 1, VOUCHER CHECK No. 93	\$133.84
DR. A. T. McCORMACK, Bowling Green.	
To postage on June 1st JOURNAL	\$ 8.84
To May salary	125.00
June 1, VOUCHER CHECK No. 94	\$ 40.00
DR. L. H. SOUTH, Bowling Green.	
To May salary as Business Manager of JOURNAL.	
June 1, VOUCHER CHECK No. 95	\$ 75.00
CLYDE W. HOWELL, Bowling Green.	
To May salary as Stenographer.	
June 1, VOUCHER CHECK No. 96	\$ 2.00
DR. PEYTON LIGON, Henderson.	
To witness fee paid Luey Williams.	
June 1, VOUCHER CHECK No. 97	\$ 5.00
AMERICAN MEDICAL ASSOCIATION, Chicago.	
To 1915 dues to A. M. A. for Dr. G. M. Center, Stillwater, Ky.	
June 1, VOUCHER CHECK No. 98	\$ 13.50
JOHN C. RAY, Sheriff of Warren County.	
To executing 11 subpoenas Dr. Blackburn vs. Annie M. Miller, (Meh 2.) ..	\$ 2.75
To executing 10 subpoenas Dr. Blackburn vs. Annie M. Miller (May 20) ..	2.50
To executing 1 subpoena Dr. Blackburn vs. Annie M. Miller, (May 26) ..	.25
To executing 9 subpoenas Dr. Blackburn vs. Annie M. Miller (May 27) ..	2.25
To executing 10 subpoenas Dr. Blackburn vs. Annie M. Miller (Oct. 20) ..	2.50
To executing 11 subpoenas Dr. Blackburn vs. Annie M. Miller (Feb. 20-15)	2.75
To executing 2 subpoenas Dr. Blackburn vs. Annie M. Miller (Feb. 20-15)	.50
June 1, VOUCHER CHECK No. 99	\$243.90
TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green.	
To 4000 sheets letter heads	\$ 12.00
To 2200 80-page June 1st JOURNALS	235.00
By 42 errors in same	10.50
To 2200 envelopes	2.20
To 26 changes	5.20

June 18, VOUCHER CHECK No. 100	\$ 9.38	
C. M. COOMBS, City Collector.		
To city taxes for 1915.		
July 1, VOUCHER CHECK No. 101	\$136.37	
DR. A. T. McCORMACK, Bowling Green.		
To postage on July 1st JOURNAL.....	\$ 9.37	
To telegrams	2.00	
To June salary as Secretary.....	125.00	
July 1, VOUCHER CHECK No. 102	\$ 40.00	
DR. L. H. SOUTH, Bowling Green.		
To June salary as Business Manager of JOURNAL.		
July 1, VOUCHER CHECK No. 103	\$ 75.00	
CLYDE W. HOWELL, Bowling Green.		
To June salary as Stenographer.		
July 1, VOUCHER CHECK No. 104	\$ 3.00	
DR. R. L. HACKWORTH, Secretary, Brooks.		
July 1, VOUCHER CHECK No. 105	\$ 5.00	
THEODORE TAFEL, Louisville.		
To rent on skeleton used in Dr. Richmond's trial.		
July 1, VOUCHER CHECK No. 106	\$151.50	
HON. FRED PORCHT, JR., Louisville.		
To attorney's fee in case of Shelbourne vs. Dr. Leo. Bloch—Services rendered in trial of case	\$150.00	
To cash paid out for Special Bailiff	1.50	
July 1, VOUCHER CHECK No. 107	\$300.00	
MESSRS. BENNETT, ROBBINS & ROBBINS, Mayfield.		
To attorneys' fee in case of J. S. Adams vs. Drs. Richmond and McMorries in Hickman County Circuit Court.		
July 1, VOUCHER CHECK No. 108	\$ 75.00	
M. T. SHELBOURNE, Attorney, Bardwell.		
To attorney's fee in case of J. S. Adams vs. Drs. Richmond and McMorries in Hickman County Circuit Court.		
July 1, VOUCHER CHECK No. 109	\$ 50.00	
S. R. CREWDSON, Attorney, Russellville.		
To attorney's fee in case of J. S. DePoyster vs. Dr. L. B. Wilkerson in Logan County Circuit Court.		
July 1, VOUCHER CHECK No. 110	\$276.15	
TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green.		
To 428 gold badges, etc	\$ 18.85	
To church plate	2.25	
To commercial exhibits	3.50	
To registration blanks—both sides	4.50	
To 2400 80-page July 1st JOURNALS	245.00	
By 19 errors in same		4.75
To 2400 envelopes	2.40	
To 22 changes	4.40	
August 1, VOUCHER CHECK No. 111	\$125.00	
DR. A. T. McCORMACK, Bowling Green.		
To July salary as Secretary.		
August 1, VOUCHER CHECK No. 112	\$ 40.00	
DR. L. H. SOUTH, Bowling Green.		
To July salary as Business Manager of JOURNAL.		
August 1, VOUCHER CHECK No. 113	\$ 75.00	
CLYDE W. HOWELL, Bowling Green.		
To July salary as Stenographer.		
August 1, VOUCHER CHECK No. 114	\$128.96	
W. C. MORRIS, Postmaster, Bowling Green.		
To 4000 No. 5 two-cent stamped envelopes.....	\$ 84.96	
To 2000 No. 8 two-cent stamped envelopes.....	44.00	
August 1, VOUCHER CHECK No. 115	\$ 5.00	
JAMES E. FAHEY, Official Stenographer, Louisville.		
To taking testimony in case of Shelburne vs. Dr. Leo Bloch.		
August 1, VOUCHER CHECK No. 116	\$249.40	
TIMES-JOURNAL PUBLISHING COMPANY, Bowling Green.		
To 2400 80-page August 1st JOURNALS	\$245.00	
By 11 errors in same		2.75
To 2400 envelopes	2.40	
To changes in make-up	2.25	
To 3 cuts	2.50	
September 1, VOUCHER CHECK No. 117	\$125.00	
DR. A. T. McCORMACK, Bowling Green.		
To August salary as Secretary.		
September 1, VOUCHER CHECK No. 118	\$ 40.00	
DR. L. H. SOUTH, Bowling Green.		
To August salary as Business Manager of JOURNAL.		
September 1, VOUCHER CHECK No. 119	\$ 75.00	
CLYDE W. HOWELL, Bowling Green.		
To August salary as Stenographer.		

EXHIBIT "C."

Detailed list of receipts from county societies from September 1, 1914 to September 1, 1915 compared with incomes of same period last year.

	1914	1915
Adair	\$ 27.00	\$ 31.00
Allen	39.00	33.00
Anderson	24.00	30.50
Ballard	51.00	58.50
Barren	71.00	63.00
Bath	35.50	24.00

Bell	118.00	99.00
Boone	45.00	37.50
Bourbon	54.00	54.00
Boyd	57.00	67.00
Boyle	39.00	44.00
Bracken	15.00	18.00
Breathitt	21.00	28.50
Breckinridge	48.00	58.50
Bullitt	39.00	54.50
Butler	20.50	19.50
Caldwell	45.00	33.00
Calloway	71.00	53.00
Campbell Kenton	200.00	394.50
Carlisle	33.00	43.00
Carroll	45.00	39.00
Carter	57.00	56.50

Casey	39.00	24.00
Christian	137.60	131.00
Clark	54.00	78.00
Clay	27.00	27.00
Clinton	15.00	18.00
Crittenden	29.50	23.50
Cumberland	33.00	36.00
Davies	207.00	207.00
Elliott	6.00	6.00
Estill	8.50	15.50
Fayette	203.00	225.00
Fleming	54.00	57.00
Franklin	63.00	57.00
Floyd		42.00
Fulton	33.00	45.00
Gallatin	11.50	15.00
Garrard	29.50	33.00
Grant	38.00	40.50
Graves	93.00	99.00
Grayson	63.00	51.00
Green	14.25	15.04
Greenup	36.00	30.00
Hancock	3.00	3.00
Hardin	60.00	69.00
Harrison	60.00	63.00
Hart	47.50	37.00
Hartlan	23.00	37.50
Henderson	104.00	99.00
Henry	48.00	54.00
Hickman	42.00	46.00
Hopkins	83.50	90.00
Jackson	11.50	9.00
Jefferson	660.00	802.50
Jessamine	21.00	24.00
Johnson	25.50	33.00
Knott	6.00	
Knox	48.00	54.00
Larue	35.50	37.50
Laurel	47.50	42.00
Lawrence	11.50	26.40
Lee	24.00	24.00
Leslie	15.00	9.00
Letcher	25.00	17.00
Lewis	12.00	22.00
Lincoln	51.00	54.00
Livingston	21.00	24.00
Logan	73.00	69.00
Lyon	27.00	27.00
McCracken	122.50	136.00
McLean	27.00	36.00
McCreary		27.00
Madison	51.00	60.00
Magoffin	18.00	24.00
Marion	51.00	53.00
Marshall	51.00	45.00
Martin	3.00	3.25
Mason	36.00	67.50
Meade	29.00	30.00
Menifee	3.00	9.50
Mercer	57.00	60.00
Metcalfe	31.50	40.00
Monroe	42.00	40.50
Montgomery	57.00	57.00
Morgan	15.00	15.00
Muhlenberg	63.00	66.00
Nelson	47.50	51.00
Nicholas	36.00	46.50
Ohio	30.00	33.00
Oldham	35.50	34.00
Owen	27.00	27.00
Owsley	15.00	15.00
Pendleton	54.00	59.50
Perry	21.00	24.00
Pike	36.00	45.50
Powell	21.00	27.00
Pulaski	56.50	36.00
Robertson	15.00	15.00
Rockcastle	24.00	27.00
Rowan	20.00	21.00
Russell	18.00	30.00
Scott	48.00	63.00
Shelby	78.00	63.00
Simpson	32.50	36.00
Spencer	9.00	15.00
Taylor	27.00	39.00
Todd	35.50	37.00
Trigg	27.00	15.00
Trimble	18.00	21.00
Union	64.00	51.50
Warren	138.00	146.92
Washington	36.00	36.00
Webster	33.00	28.00
Wayne	24.00	24.00
Whitley	81.00	100.50
Wolfe	24.00	27.50
Woodford	24.00	24.00

EXHIBIT "D."

INVOICE OF PROPERTY OF ASSOCIATION, SEPTEMBER 1, 1915.

Addressograph with 5,000 complete address plates with list devices, etc	\$ 600.00
Folding machine	140.00
2 Oliver Typewriters	200.00
1 Desk	79.00
Filing Cases	64.75
Rubber Stamps	9.00
Typewriter Cabinet	33.00
Guide Cards	7.48
13 Adding Machine	106.25
Typewriter Chair	8.00
1 Electric Fan	18.00
1 Desk Chair	32.50
1 Globe Cabinet Safe with Fixtures	130.00
4000 No. 5 two-cent stamped envelopes	84.96
2000 No. 8 two-cent stamped envelopes	44.00
Total	\$1,556.94
Reduction for depreciation of machinery	400.00
	\$1,156.94

EXHIBIT "G."

Secretary's Monthly Balance Sheet agreeing with the books.

1915	Balance.
September 1, 1914 Balance on hand	\$3,486.02
October 1,	\$ 1,196.02
November 2,	579.49
December 1,	580.57
January 1,	553.70
February 1,	1,389.31
March 2,	1,517.14
April 1,	2,661.69
May 1,	1,593.40
June 1,	815.52
July 1,	1,036.89
August 1,	600.83
September 1,	5,878.80
	\$10,131.78
Interest on Time Deposit collected..	45.00
By interest on Investment Bond...	59.90
Total Collections...	\$12,629.46
Balance September 1, 1914	3,486.02
	\$16,115.48
Balance September 1, 1915	\$ 5,983.70
Total Expense	10,131.78
	\$16,115.48

EXHIBIT "H."

Collections by Editor on account of the JOURNAL, corresponding with checks, deposit slips and receipts filed herewith.

1914-1915	
October 1, To Collections to October 1...	\$ 967.02
November 1, To collection to November 1	521.49
December 1, To collection to December 1	549.57
January 1, To collection to January 1..	412.70
February 1, To collection to February 1	357.81
March 1, To collection to March 1.....	659.64
April 1, To collection to April 1	456.23
May 1, To collection to May 1	411.65
June 1, To collection to June 1	379.52
July 1, To collection to July 1	923.89
August 1, To collection to August 1	507.93
	\$6,147.45
March 2, To interest on Real Estate Bond	\$ 59.90
August 4, To interest on Time Deposit	45.00
	\$ 104.90
Total	\$6,252.35

EXHIBIT "L."

Collections by Secretary on account of Kentucky State Medical Association corresponding with checks, deposit slips and receipts filed herewith.

1914-1915	
October 1, To collections to October 1	\$ 229.00
November 1, To collection to November 1	58.00
December 1, To collection to December 1	31.00
January 1, To collection to January 1	141.00
February 1, To collection to February 1	1,031.50
March 1, To collection to March 1	857.50
April 1, To collection to April 1	2,205.46
May 1, To collection to May 1	1,181.75
June 1, To collection to June 1	436.00
July 1, To collection to July 1	113.00
August 1, To collection to August 1	92.90
	<hr/> \$6,377.11

REPORT OF THE SECRETARY.

I have the honor of submitting the following report from September 1, 1914, to September 1, 1915. Our roll shows an increase of 170 paid members in good standing on the latter date. This indicates that more county secretaries have introduced accurate business methods, but it has been impossible to get many of our members to understand the importance of paying their dues promptly. A few more than twenty-four hundred doctors are carried on the rolls of the various county societies. Between four hundred and six hundred of these pay their dues on an average of about one year in five and are missed in the annual collections by the secretaries the other years. Most of these are good men but are in the counties which have no real organization. During a large period of the time such men fail to receive the JOURNAL, and so are not kept in touch with the progress of their fellows in the State, do not understand what the organization is doing, and consequently can not be interested in its affairs. Even in the past six months, quite a number of members have paid their dues. It is difficult for them to understand why they are not protected by the Medico-Legal Committee, and many of them will not realize that on January 1st, their dues will again be payable, and in the few intervening months, they will not get into the habit of reading the JOURNAL. Our members should realize that this Association still has its most important work before it—to make a real working body of each of the county societies which are now mere shells. A county society which only collects the dues of its members at an annual meeting or without one, is but little better than none; and some of the doctors in each county will have to realize this and do some actual work if the county medical society is to mean anything to them or to others. If those physicians who have not had the benefit of regular county medical meetings and the consequent interchange of scientific and other knowledge with their associates, could attend a few ses-

sions of such societies as are held in Harrison, Bell, Oldham, Christian, Fayette, Graves, McCracken, Henderson, Warren, Daviess, or many of the other sixty or more counties holding regular meetings, this condition of affairs soon would be brought to an end. Our organization has but one use and but one single purpose—to better qualify the practicing physicians who do the real work of caring for the sick and afflicted people of the State, and to prevent disease and death.

I desire to again call the attention of our members to the fact that the new text book on sanitation teaches every child attending our common schools to ask his family physician whether he attends a county society meeting regularly, and warns the children that he is not a safe doctor unless he does so. Popular education is increasing so rapidly in all the realm of preventive medicine and actual medicine that it is essential that every doctor in the State understands that the people are being educated as to possibilities undreamed of a few years ago, and that he be prepared and attuned to this increased popular knowledge. It is of interest that practically every physician in the State who has done post-graduate work in the past year has come from a county which has a good working county society.

The attached tables show the average membership for the past five years compared with the membership of 1915, with the increase or decrease as the case may be. It will be noted that the First, Second and Fourth Districts show decreases in membership, while each of the others show increases.

FIRST DISTRICT.

		Av. M'b'rshp			
County	5 Yrs.	1915	Inc.	Dec.	
Ballard	19	20	1	...	
Caldwell	15	11	...	4	
Calloway	20	18	...	2	
Carlisle	13	13	...	...
Fulton	17	14	...	3	
Graves	28	33	5	...	
Hickman	15	16	1	...	
Livingston	8	8	...	...
Lyon	8	9	1	...	
Marshall	17	15	...	2	
McCracken	44	45	1	...	
Total	212	207	9	14	

SECOND DISTRICT.

		Av. M'b'rshp			
County	5 Yrs.	1915	Inc.	Dec.	
Breckinridge	16	20	4	...	
Crittenden	10	8	...	2	
Daviess	70	68	...	2	
Hancock	1	1	...	...
Henderson	36	33	...	3	
Hopkins	31	30	...	1	
McLean	11	11	...	...
Ohio	12	11	...	1	
Muhlenberg	27	21	...	6	
Union	18	14	...	4	
Webster	10	9	...	1	
Total	242	226	4	20	

THIRD DISTRICT.

Av. M'b'rship					
County	5 Yrs.	1915	Inc.	Dec.	
Allen	10	11	1	...	
Barren	21	21	...	...
Butler	7	6	...	1	
Christian	37	45	8	...	
Cumberland	9	11	2	...	
Logan	26	23	...	3	
Metcalfe	10	13	3	...	
Monroe	8	13	5	...	
Simpson	13	12	...	1	
Todd	15	12	...	3	
Warren-Edmonson	55	45	...	10	
Total	211	212	19	18	

FOURTH DISTRICT.

Av. M'b'rship					
County	5 Yrs.	1915	Inc.	Dec.	
Ballitt	10	18	8	...	
Grayson	26	17	...	3	
Hardin	26	23	...	3	
Hart	15	11	...	4	
Henry	17	18	1	...	
Larue	11	12	1	...	
Meade	10	10	...	...
Nelson	18	17	...	2	
Oldham	12	11	...	1	
Shelby	25	21	...	4	
Total	165	158	10	17	

FIFTH DISTRICT.

Av. M'b'rship					
County	5 Yrs.	1915	Inc.	Dec.	
Anderson	7	10	3	...	
Boone	12	12	...	...
Carroll	15	13	...	2	
Franklin	22	18	...	4	
Gallatin	5	5	...	...
Jefferson	198	234	36	...	
Owen	12	9	...	3	
Spencer	6	5	...	1	
Trimble	7	7	...	...
Total	284	313	39	10	

SIXTH DISTRICT.

Av. M'b'rship					
County	5 Yrs.	1915	Inc.	Dec.	
Adair	10	10	...	...
Boyle	14	14	...	...
Green	6	5	...	1	
Marion	18	17	...	1	
Mercer	19	20	1	...	
Taylor	10	12	2	...	
Washington	12	12	...	...
Total	89	90	3	2	

SEVENTH DISTRICT.

Av. M'b'rship					
County	5 Yrs.	1915	Inc.	Dec.	
Casey	8	7	...	1	
Clinton	6	6	...	...
Garrard	10	11	1	...	
Lincoln	18	18	...	...
McCreary	...	5	9	...	
Pulaski	22	12	...	10	
Rockcastle	9	9	...	...
Russell	6	10	4	...	
Wayne	8	8	...	...
Total	87	90	14	11	

EIGHTH DISTRICT.

Av. M'b'rship					
County	5 Yrs.	1915	Inc.	Dec.	
Bourbon	15	15	...	...
Bracken	5	6	1	...	
Campbell-Kenton	74	98	24	...	
Fleming	13	19	6	...	
Grant	14	13	...	1	
Harrison	24	20	...	4	
Jessamine	9	8	...	1	
Mason	13	21	8	...	
Nicholas	13	14	1	...	
Pendleton	19	19	...	...
Robertson	5	5	...	...
Scott	17	21	4	...	
Woodford	11	8	...	3	
Total	232	267	44	9	

NINTH DISTRICT.

Av. M'b'rship					
County	5 Yrs.	1915	Inc.	Dec.	
Boyd	18	20	2	...	
Carter	19	18	...	1	
Elliott	4	2	...	2	
Greenup	10	10	...	...
Johnson	9	11	2	...	
Lawrence	5	11	6	...	
Lewis	6	7	1	...	
Magoffin	7	8	1	...	
Pike	10	14	4	...	
Total	88	115	30	3	

TENTH DISTRICT.

Av. M'b'rship					
County	5 Yrs.	1915	Inc.	Dec.	
Bath	12	8	...	4	
Breathitt	6	8	2	...	
Clark	23	26	3	...	
Estill	5	5	...	...
Fayette	65	72	6	...	
Lee	5	8	3	...	
Letcher	6	5	...	1	
Knott	3	0	...	3	
Menifee	2	3	1	...	
Madison	17	18	1	...	
Montgomery	17	19	2	...	
Morgan	7	5	...	2	
Owsley	5	5	...	...
Perry	7	8	1	...	
Powell	8	9	1	...	
Rowan	6	7	1	...	
Wolfe	9	7	...	2	
Total	204	213	21	12	

ELEVENTH DISTRICT.

Av. M'b'rship					
County	5 Yrs.	1915	Inc.	Dec.	
Bell	32	33	1	...	
Clay	10	9	...	1	
Harlan	5	12	7	...	
Jackson	3	3	...	...
Knox	15	18	3	...	
Laurel	13	14	1	...	
Leslie	1	3	...	1	
Whitley	23	33	10	...	
Total	105	125	22	2	

It is a matter of regret that we have not received as many of the official minutes of county societies during the past year as heretofore. These are always interesting and are of special value in bringing to the attention of other counties the work done in the county reporting. I desire to urge the members to see that the minutes are sent in regularly from the county meeting.

In conclusion I desire to record my especial appreciation of the co-operation of practically all our county secretaries in the routine work of the year which has been carried on under their direction. Next to effective councilors, which are the essential part of our society, the county secretary is the most important link in the whole chain. To him fall the arduous duties of making and filling the program and promptly collecting the dues of the members, and each society is a strong or a weak one in exact proportion to the interest of the county secretary. To my associate officers and to the whole membership and to my very efficient stenographer, Miss Clyde Howell, I desire to extend my gratitude for the assistance and courtesy which have made the duties of my position unusually pleasant during the past year.

Respectfully submitted,

A. T. McCORMACK, Secretary.

REPORT OF THE BUSINESS MANAGER.

To the House of Delegates:

The following statement is prepared to show the members of this Association, who own and control the JOURNAL what has been accomplished during the last seven years and the same statistics for each of the last two years:

Statement	1914	1915
Number of pages of reading matter	908	689
Number of Advertising pages.....	472	420
Official Announcements	47	40
Scientific Editorials	19	28
Editorials	65	72
Book Reviews	48	42
Minutes of County Societies	81	112
Original Articles	249	167

HOW THE JOURNAL IS MAINTAINED.

The entire cost of printing, distribution and other expenses incident to placing the JOURNAL into your hands each month has been paid for from funds received from its advertising pages. Its success in the future depends upon the interest in the success of this feature of your JOURNAL. We cannot urge too strongly that each and every one of you read carefully what the advertisers have to offer and wherever possible give them an opportunity to secure your patronage.

To meet the growing demands of the County Societies and to be able to publish every article that comes from you to this office, as we have always done in the past, it is necessary to not only secure more advertisers but when they offer goods of equal merit and as good or better prices, as they generally do, to support those we have.

We earnestly urge every member to look through the advertising pages of each issue and in making orders for needed supplies show as much interest in your advertisers as you do in the balance of the JOURNAL, remembering that in doing so you will provide means for a bigger and better JOURNAL.

EXHIBITORS.

An especially active campaign has been made to secure a full line of exhibits that will not only be profitable but interesting and educative. A brochure containing the floor plan and price list, also photograph and description of the place of meeting, was mailed to every reputable manufacturing firm in America with the result we have secured a most creditable display, every space being taken.

A full description of each firm's exhibit and space number will be found elsewhere in this issue.

Only those firms can exhibit that are reputable.

INDEX AND BINDER.

The January issue contains a complete Index to Volume XIII. All articles are indexed under the proper subject heading, and cross indexed under the most important word of the heading used in the JOURNAL so that ready reference to the subject is easily made. Each month's proceedings of your county societies are indexed so that a file of the JOURNAL can be used for the official records of the secretaries. There will be on exhibition at the registration booth all the JOURNALS, bound since the beginning of its publication.

HOW EACH COUNTY SOCIETY HAS HELPED THE JOURNAL.

Every article and county society report sent to the office has been published and as a matter of interest to the entire profession the following table will show what each county society has contributed to the JOURNAL for 1914 and 1915:

County	Minutes		Original Articles	
	1914	1915	1914	1915
Adair	3	0	2	1
Andersen	0	0	1	0
Barren	0	4	0	2
Bath	0	3	0	0
Bell	1	2	19	0
Boone	2	5	0	2
Bourbon	1	1	0	0
Boyd	0	0	0	1
Boyle	0	1	2	1
Breathitt	1	1	0	0
Breckinridge	0	2	0	0
Bullitt	0	2	2	0
Butler	0	0	0	0
Caldwell	2	1	0	0
Calloway	1	1	3	0
Campbell-Kenton	0	0	2	16
Carlisle	3	3	3	2
Carroll	0	0	0	0
Carter	2	0	0	0
Casey	1	0	0	0
Christian	5	7	3	5
Clark	0	1	1	0
Clay	0	0	1	0
Crittenden	0	1	3	0
Cumberland	0	1	0	0
Daviess	5	3	10	9
Eagle Valley	0	2	0	0
Fayette	0	0	6	2
Fleming	0	0	0	2
Floyd	0	1	0	0
Franklin	3	6	2	0
Fulton	1	0	0	0
Gallatin	0	0	0	0
Garrard	0	2	0	0
Grant	0	0	1	0
Graves	1	0	0	0
Greenup	4	4	5	1
Hancock	0	0	0	1
Hardin	0	0	1	0
Harlan	1	0	0	0
Harrison	4	3	2	1
Hart	0	0	1	0
Henderson	5	0	3	1
Henry	2	0	3	1
Hickman	0	0	0	0
Hopkins	0	0	3	0
Jefferson	1	0	108	85
Johnson	0	1	0	0
Knox	1	4	2	0
Laurel	1	1	1	0
Lincoln	0	0	1	0
Lyon	0	2	0	1
McCreary	0	1	0	0
McCracken	2	2	1	4
McLean	1	1	1	0
Madison	0	0	1	0
Magoffin	0	1	0	2
Marion	0	0	2	2
Mason	0	1	1	0
Mercer	0	0	0	1
Montgomery	0	1	0	2
Muldraugh Hill	0	4	0	0
Nelson	1	1	1	1
Oldham	3	1	14	3

Owen	1	3	0	0
Pendleton	10	5	13	7
Pike	0	1	0	0
Pulaski	0	0	0	1
Robertson	0	1	0	0
Rowan	1	1	0	0
Russell	0	3	0	1
Scott	1	2	0	1
Shelby	3	3	1	1
Simpson	0	1	1	0
Spencer	0	0	0	3
Taylor	2	6	1	0
Todd	1	1	1	0
Union	0	0	0	1
Warren-Edmonson	4	2	5	3
Wayne	0	1	0	0
Webster	0	1	1	0
Whitley	2	1	1	0
Wolfe	0	0	0	0
Woodford	0	2	0	0
Total	82	112	238	167

Earnestly trusting that each one of you will return to your county societies resolved to encourage its membership to do even more than it has in the past to assist in making the JOURNAL bigger and better.

Respectfully submitted,

L. H. SOUTH,

Business Manager.

THE COMMERCIAL EXHIBIT.

MELLINS FOOD COMPANY, OF BOSTON.

Space No. 1.

Physicians seriously interested in the problems of infant feeding will have ample opportunity to make inquiries regarding the manufacture and composition of Mellin's Food and the application of this product in directing the nutrition of the normal, healthy infant as well as the baby with a disturbed digestion.

FAIRCHILD BROS. & FOSTER, NEW YORK,

Space No. 2.

Fairchild Bros & Foster will exhibit their well known digestive products.

THE DENVER CHEMICAL MFG. CO., NEW YORK,

Space No. 3.

The Denver Chemical Company will exhibit Antiphlogistine.

WEDEK MANUFACTURING CO., PHILADELPHIA,

Space No. 4.

Will have their twins on Exhibit, better known as "DE LYTE SURGEON" Electric Diagnostic Case and Illuminating set, with head band, Ear, and Nasal Speculum, Tongue Depressors, Magnifying Glass, in leather case. Indispensable to the General Practitioner in making his daily calls. Price \$6.00.

The "SIMPLEX SURGEON" is that surgical set, that you can carry in the vest pocket to meet every emergency. It has 6 instruments, needles and silk and 2 handles, in a metal tube, 1-2 by 3 1-2 inches, is Multum in Parlo, Price \$5.00.

THE SPIRELLA CORSET SHOP, LOUISVILLE.

Space No. 5.

The hygienic and sanitary qualities of the Spirella Stay are beyond question. The average corset boned with stiff, flat, unyielding stays covers nearly one third of the body with solid metal and prevents a free circulation of air to the body. With the open, thoroughly ventilated Spirella stay the air is permitted to pass through and circulate freely. Another attribute of the Spirella corset is that it can be laundered without removing the stays.

Spirella's motto is "A Style for Every Type of Figure," and all garments are modeled over living figures. By conforming snugly to every curve, yielding to every movement of the body, and confining without injurious compression, they give that fashionable elegance of contour which is so much desired and is obtained by abdominal uplift.

As evidence of the approval of "Spirella" by fashion and medical science we cite a few of the honors, diplomas and medals that have been awarded to the Spirella corset wherever it has entered into competition with other

In 1911 the National Exposition of Cuba gave Spirella corsets the diploma and gold medal. In 1912 in Rome, Italy, "Spirella" was awarded the grand prize and gold medal. In 1912, at Milan, Italy, the cross of honor and gold medal was bestowed upon "Spirella." In 1912, at Brussels, the capital of Belgium, "Spirella" took the grand prize. In 1912, at Genoa, Italy, "Spirella" took the only prize offered—the gold medal. In 1912, Vienna, the capital of Austria, gave the highest award, a gold medal, to "Spirella." In 1913, Paris (the citadel of Fashion), bestowed upon "Spirella" the diploma of merit and grand prize. These honors were given at the greatest international exposition of the old world. At the first National Conservation Exposition held in the United States, in September and October, 1913, at Knoxville, Tenn., "Spirella" was awarded the highest possible honors in the form of a gold medal and diploma.

The nucleus of the phenomenal success of "Spirella" is attributable to the underlying principles of professional corset service in the privacy of the home by thoroughly trained corsetieres. These specialists in corset fitting are enabled by their training to give that necessary individual control to a flexible garment without stiffening the garment to such an extent as to hamper free bodily movement. The Spirella stay has strongly appealed to the American woman who has been used to plenty of exercise, who has considered her bodily welfare, with regard to dietetics and hygiene, as well as the sanitary manufacture of her

garments, and who has in every way sought to express freedom of body and mind.

Spirella corsets are not sold in stores. To permit this would defeat the very purpose of "Spirella," which is to give a trained, professional service in connection with stylish, healthful and scientific corsetry.

In point of medical recognition Spirella is without a peer among corsets. The Institute of Hygiene of London, England, having as its members the greatest medical men of the United Kingdom, granted this corset its certificate for four successive years. The International Institute of Hygiene at Paris, France—the highest authority among physicians—in 1913 granted Spirella corsets the *Palme d'Or*, the "blue riband" of the medical world. *the first time this honor has been bestowed upon any corset.*

Spirella also enjoys the recommendation of our own native medical men which we prize most highly.

SPIRELLA CORSET SHOP,

410-411-412 Courier-Journal Bldg.
Louisville, Ky.

THE ODO-RO-NO COMPANY, CINCINNATI, OHIO,

Space No. 7.

The Odo-Ro-No Company will exhibit a toilet water which overcomes the odor from excessive perspiration.

REED & CARNRICK, JERSEY CITY,

Space No. 8.

The exhibit of Reed & Carnrick will be purely of a scientific nature, showing the different stages in the manufacture of their various physiological and glandular products. Each gland is shown separately beginning with the maceration of the fresh glands as they come from the selected animal, down to the final stages where, as a fine powder, they enter into the formation of the particular products desired. The glands exhibited in their various stages of preparations are in part the pancreatic, peptic, intestinal, thyroid, thymus, renal, splenic and salivary glands. Tests for some of the special internal enzymes will be made, and the microscope will be used to show the microscopical appearance of the various nucleo-enzymes as they appear in powder form.

HORLICK'S MALTED MILK COMPANY, RACINE,
WISCONSIN,

Space No. 9.

Will display "Horlick's" the Original Malted Milk, together with Horlick's Food and Horlick's Diastoid. They will also serve the delicious Horlick's Malted Milk Ice Cream. Physicians appreciate that "Hor-

lick" is the originator of Malted Milk, and that the name insures quality and uniformity, and commend it highly where a safe, palatable and easily digested food is indicated

McALASTER-WIGGIN COMPANY, CHICAGO.

Space No. 10.

The MacAlaster-Wiggin Company exhibit of X-ray Tubes, is one that will be of especial interest to the Radiographers this year. They are exhibiting a tube equipped with a new and improved cathode shield, which permits an extremely heavy milliamperage to be passed through the tube, without overheating the cathode neck, thus eliminating cracking of the cathode neck, and greatly increasing the scope and efficiency of the tube.

This tube has been thoroughly tested before being offered to the profession, and has the indorsement of all who have used it.

Their display of Kimpton-Brown and Vincent Blood Transfusion Tubes is timely, and should be of interest to all, because of the favorable attention these tubes are attracting throughout the Country. Their representative, Mr. E. B. Taylor, will be pleased to demonstrate the technic to those interested.

COLGATE & COMPANY, NEW YORK,

Space No. 14.

You recognize the excellence of Colgate's Tale—the real boric powder. Are you acquainted with Ribbon Dental Cream, a dentifrice of the highest rating—Colgate's Charmis Cold Cream that is safe for use in fever cases—with Coleo Soap, made entirely of vegetable oils?—with Colgate's Sulphur Soap that many physicians regard so highly?

A continuous existence of 109 years gives a manufacturing experience insuring rare ability. Moreover, Colgate & Company are large enough to make for their preparations much of the basic material that other manufacturers are forced to buy in the open market. If you know only one Colgate article, you owe it to yourself to learn by test the wholesome worth of the other products bearing the name of this century-old firm.

At the Colgate exhibit booth you will be given information and trial sizes of various "Colgate Comforts."

COLGATE & COMPANY,
Established 1806.

THE ABBOTT LABORATORIES, CHICAGO,

Spaces Nos. 15 and 16.

In line with progress and to meet the more accurate definition of their line of dependable pharmaceutical and biologic products the Abbott Alkaloidal Company, of Chicago, has changed their name as above.

Their policies and personnel remain the same and you are urged to spend some time with their exhibit of crude drugs, active principles and biologics.

Ask any question you wish and be sure to register for samples and literature.

NOTE: The U. S. Pharmacopeia recognizes 48 active principles and their salts. This gives you an assurance as to their scientific character.

D. APPLETON & COMPANY, NEW YORK,
Space No. 17.

The Appletons, publishers of authoritative books on medicine and surgery for over fifty years, are featuring in their exhibit their latest publication, a new five-volume work, "Operative Therapeutics," edited by Alexander Bryan Johnson, as well as several distinctive books on Diseases of the Kidneys, Ureters and Bladder, Diseases of the Stomach, Borderline Diseases, Anemia and Resuscitation, Anesthesia, Occupational Diseases, Diseases of Women, Pain, etc., by such men as Doctors Howard A. Kelley, Charles G. Stockton, J. N. Hall, George W. Crile, James T. Gwathmey, W. Gilman Thompson, Charles T. Reed, Richard J. Behan and other notable physicians who are on the Appleton list.

THEO. TAFEL, LOUISVILLE,

Among the exhibitors at this year's meeting will be the old reliable Louisville firm of Theo. Tafel, who will make his usual display of Surgical Instruments, also a special display of Electric Incubators, and Bausch & Lomb Microscopes and Centrifuges.

We would also like to emphasize the fact that their store is located in this City, and we hope that the physicians will make same their headquarters:

G. H. SHERMAN, M. D., DETROIT,
Space No. 18.

G. H. Sherman, M. D., will exhibit his biological specialties and vaccines.

THE PHYSICIANS' SPECIALTY CO., LEESBURG,
VIRGINIA,
Space No. 19.

The Physicians' Specialty Company will exhibit the plaster and electric cabinet. This cabinet has a tankless compressed air outfit, nebulizing outfit, and electric heater for either fluids or air, a vibrator with the simultaneous application of heat and vibration, set of vacuum cups, high frequency currents, Canterbury Transformer, Diagnostic Light Controller, Sinusoidal Current with X-ray and other currents.

THE AMERICAN CHIELE CO., LOUISVILLE,
Space No. 24.

The American Chiele Company, will exhibit Kis-Me Gum.

STANDARD OIL COMPANY, LOUISVILLE,
Space No. 25.

The Standard Oil Company will exhibit Stanolax.

HEIDBRINK CO., MINNEAPOLIS, MINN.,

The Heidbrink Company will exhibit their Automatic Anaesthetizer for administering nitrous oxid and oxygen.

SHARP & SMITH, CHICAGO,
Space: Nos. 27, 28 and 29.

Will exhibit a complete line of Physicians' supplies and Surgical Instruments comprising the latest and most improved patterns.

THE CHAS. H. PHILLIPS CHEMICAL COMPANY,
LONDON AND NEW YORK,
Space No. 30.

The Chas. H. Phillips Chemical Co., London and New York, as usual, will display and sample:

Phillips' Milk of Magnesia. A pure hydroxide of Magnesium. "The Perfect Antacid" and milk modifier.

Phillips' Phospho-Muriate of Quinine Compound. Condensed tonic and cell builder.

Phillips' Emulsion of God Liver Oil. Fine as the fat in chyle—ready for assimilation.

Phillips' Digestible Cocoa. A nourishing, easily digested liquid food. Substitute for plain milk where latter is not liked or is tired of.

DR. H. M. ALEXANDER & CO., MARIETTA, PA.,
Space No. 31.

Alexander & Company expect to prepare an exhibit illustrating the products manufactured by them as well as the various steps taken in the preparation of the said products. The Alexander Laboratories have the contract for supplying Diphtheria Antitoxin under the direction of the Kentucky State Board of Health. Their products are guaranteed under U. S. Government License No. 3.

RAY BROTHERS, LOUISVILLE,
Space No. 12.

Ray Brothers of No. 2 Paul Jones Building, Louisville, will exhibit the Victrola.

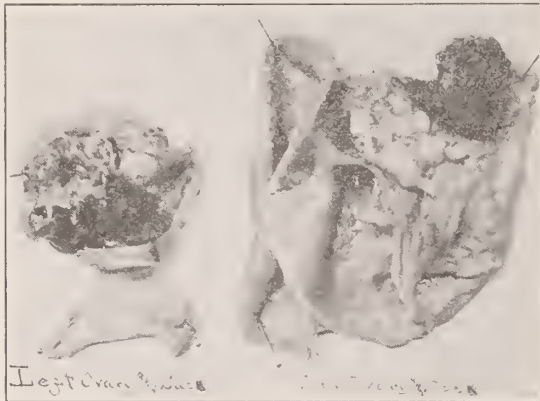
ORIGINAL ARTICLES

BILATERAL DERMOID CYSTS OF THE OVARY.*

By A. H. BARKLEY AND H. G. HERRING,
Lexington.

Dermoid cysts while not infrequently met with in various parts of the body are at all times more or less interesting and while the writer has within the past twenty years met with very few of these cases, the one cited below was of especial interest hence warrants reporting.

While dermoids occur in many parts of the body they are usually met with in connection with diseased pelvic organs and are usually unilateral though they occur on both sides as often as 30 per cent. according to some observers. They occur at any age but most frequent-



The above shows left and right ovary with a large portion of the Dermoid sac removed. Hair and teeth are plainly shown.

ly during the period of sexual activity.

There is much variation in the size as in other cysts, as one case reported had as much as twenty pints of fluid within its sack. The one reported below is bilateral. The cyst on the right side occupied almost the entire abdominal cavity crowding the cyst on the left side and the other abdominal organs into a comparatively small space.

The contents of a dermoid sack is always interesting as not only teeth and hair have been found but cases are reported where ribs, pelvic bones, jointed bones, fingers, etc., have been found.

Fortunately it is for those afflicted with a dermoid cyst that the sac contents are usually sterile and while they are classed as benign tumors they may, however, under certain conditions, be associated with malignant disease and may itself undergo a malignant degenera-

tion though this latter condition is by no means common according to those who see many such cases.

REPORT OF CASE.

Evylin Lankford, colored, age 26, weight 160 lbs. Married 10 years, one male child living and a miscarriage at 7 months. This happened some eight years ago and has never been pregnant since.

Family History. Father living and well. Mother dead of tumor, the history of which was very indefinite. She has seven brothers and five sisters living, one brother and one sister dead. Sister was burned to death and brother died of pneumonia.

Personal History. Measles at six, scarlet fever at twelve. She menstruated at eleven years old. She never had any trouble with her periods only that it was scant at times, very little pain and generally lasted about two days. She was married at sixteen and gave birth at seventeen. No trouble with menstruation during or after this time.

PRESENT TROUBLE.

Her trouble began three years ago in January, 1911, she missed her menstrual periods in January and February, and began to feel bad, although complaining of no pain at this time her abdomen began to swell and continued to get larger, later on her feet also began to swell. In March her periods appeared and lasted ten days accompanied with headache and pains in abdomen, flow was bright red in color and no clots. A few days later she passed pieces of flesh as she called it, accompanied by white discharge with a very foul odor. In April she menstruated for two days with very little pain and no discharge, missing her periods in May and June. In July she was sick and called another doctor. He examined her and said that she had a tumor. She menstruated in August and has menstruated ever since up to November, 1914.

She was ill in September, 1914, and her case was diagnosed as typhoid at that time and she had a relapse with no sequelae following. At this time her abdomen was markedly enlarged, she flowed all through this sickness up to November, 1914, and since then has not flowed up to the time of operation.

During the three years of sickness she lived in Memphis where a diagnosis of malaria was made and in Louisville where a diagnosis of typhoid was made, later moving to Lexington.

PATHOLOGICAL DIAGNOSIS.

Right ovary, which held about one and a half gallons of a milky white, thick fluid. The sac was very tough and in places was as thick as one eighth of an inch. After evacuating the contents of the sac and at its base a ball of

*Read before the Fayette County Medical Society.

brown hair about the size of a small egg and five or six teeth studded around the hair.

The left ovary, the sac of which, was completely filled with hair and teeth and was about the size of an egg.

The microscopical examination after the slides were made, showed in the first three or four heavy connective tissue surrounded by layer of cells, mostly mononuclears also connective tissue with hyaline change. There were a few pigmented cells and embryonic muscle fibers. One section cut through a small elevation which stuck out into the cervix and showed hair, sebaceous glands and squamous epithelium and voluntary muscles showing Brown atrophy also a small bone which was dug out of the section.

THE MANAGEMENT OF INTERRUPTED PREGNANCY.*

By J. L. ATKINSON, Campbellsville.

I have selected this subject for discussion because of the apparent increase in the number of such cases met with in ordinary practice. I cannot be sure whether this increase is due to the known fact that the present age is one in which women suffer more from diseased and abnormal conditions of the generative organs, or from the cause suggested by the facetious poet who perpetrated the parody on "The old woman who lived in a shoe, She had no children because she knew what to do."

I think both causes bear a share in the etiology of these accidents. I shall not dwell on the diseased conditions that may be responsible, or any of the etiologic factors, more than to say that in our community many miscarriages occur not from the two causes mentioned, but because of the imprudence of the pregnant woman who is inadvertently guilty of overwork, or physical strain which she should avoid, and probably would do so did she realize the serious consequences that might follow.

We will consider only those conditions which pertain when the pregnancy is interrupted between the beginning of pregnancy, and the end of the fifth month, because after the fifth month the conduct of such cases is practically the conduct of labor at full term.

Abortion and miscarriage I have included under the broad term of interrupted pregnancy, leaving the finer distinction to each of you as you may care to differentiate, but I shall consider some of the differences and difficulties of two periods. The first period covers the time from the early weeks of pregnancy to about two and a half months, and

the other period covers the time from two and a half months to the end of the fifth month.

I think we will all agree that many pregnancies are terminated in the first and second weeks causing only the symptoms of a profuse menstruation, and usually considered by the patient as a normal menstrual period made worse by being delayed. We also know that many of these early abortions are caused by taking strong purgatives by women who smother their consciences into the belief that they are not pregnant, and such medication is not wrong, and the delay is caused by taking a bath that is too cool, or "taking cold." Cold, by the way, is a convenient term to cover a multitude of sins among the laity, and a vast amount of ignorance and carelessness among physicians, of whom I am not the least guilty.

Occasionally we may be called to see a woman in the inception of the first symptoms indicating that pregnancy may be interrupted but this occurs only with those rare individuals who are anxious for offspring. Usually the first symptom that prompts the calling of a physician is a profuse hemorrhage, at which time the abortion is inevitable. Frequently this hemorrhage has been sufficient to weaken the patient very much, and sometimes the loss of blood has been so great as to cause some fears for the life of the patient, though I cannot now recall any case of death from the loss of blood alone. If the bleeding has continued for several days, or weeks, and has been of small quantity, we will find that little or no dilatation of the cervix has taken place and the examining finger cannot be passed through the internal os, but if the hemorrhage has been rapid and free we will find the cervical canal more or less dilated. If there is no dilatation or it is very slight the question presents what shall we do to control the loss of blood, and what means shall we adopt to remove the fetal remains that have now become a menace. The well-placed tampon in cervix and vagina, of either gauze or cotton, is a very reliable means for controlling the loss of blood. It also frequently excites uterine contractions which both controls bleeding and favors expulsion of the uterine contents; in fact a tampon, properly placed, in such conditions will frequently terminate the abortion. First pack the cervix, which is best done with gauze, and then the vagina with gauze or cotton, and leave this in place twelve or twenty-four hours. By this time the tampon should be removed, and usually the dilatation is sufficient to gain access to the uterine cavity, or, if the ovum is intact, the tampon has caused it to be expelled entire. If the tampon has failed in its purpose another should be placed and left for a like interval of time, since it is reasonably sure to

*Read before the Taylor County Medical Society.

control the hemorrhage, and, if done with proper aseptic precautions, the patient is practically safe from infection. If we find there is sufficient dilatation to admit the finger there should be no delay in emptying the uterus. This may be done with the finger, or curette, or forceps. I am aware of the fact that the great preponderance of authority favors the finger as the instrument of choice, and no doubt when we consider the possibility of traumatism to the uterus, the finger is the safest, but you all know the difficulty encountered in introducing the finger to the fundus of a uterus one or two months pregnant, and the pain it gives the patient. In such cases I rely on the curette because of the ease with which we can reach the offending substance, and the small amount of pain produced. I am also aware of the condemnation pronounced against the spiral curette, but I have been using them with such success for many years, that would now be at a loss without them in a case of abortion within the first two or two and a half months. I have found that there is a difference in the effectiveness of the different patterns of the spiral curette, and we should always use the best. It is frequently necessary to use the dull curette to complete the removal of the debris. We all recognize the fact that the curette, of whatever kind, is an instrument of danger when carelessly used but the doctor should not be careless in anything he may do, because the careless doctor is a dangerous instrument.

Strict asepsis is as necessary in dealing with these cases of interrupted pregnancy as in any abdominal operation, and should be thorough. It is an evident fact that instruments can be much more certainly sterilized than the hands, which is an important point in favor of the curette.

As a rule the early abortions cause the most alarming hemorrhage. Why this is true I know not unless it be that the contraction of the larger uterus will close the broken blood vessels.

These early abortions, occurring before the middle of the third month, are much more frequent than those occurring during the next ten or twelve weeks, and usually present much less difficulty in the treatment. After the first twelve weeks of pregnancy the uterus enlarges rapidly, the placenta is much more developed as a separate and distinct organ from the fetus, and during this stage, if the normal course of pregnancy is interrupted, the product of conception is not likely to be passed en masse, but at a variable period after the hemorrhage begins, the amniotic fluid escapes, followed by the passage of the fetus, the placenta being retained. If the physician be at hand at this time while there is sufficient cervical

dilatation, the cleansing of the uterine cavity, with the finger or curette, is not such a difficult matter; but often the cervix is found contracted, and hemorrhage continues with very little indication of the uterine contents being expelled by the natural forces. These cases present rather a difficult problem. Immediate relief can be given only by putting the woman under an anaesthetic and forcible dilatation. This is an operation that should not be undertaken without medical assistance, and then only when symptoms demand immediate interference. If we adopt the expectant plan it should be a period of watchful waiting, which is not very practical in country practice because the patient may live too far away to be seen frequently. This is a condition in which the tampon may do splendid service. With close attention to aseptic detail the cervix should be well packed with gauze, and the vagina treated in the same manner with gauze or cotton. This will control the hemorrhage and promote dilatation so that at a subsequent visit the uterus may be cleansed with no great difficulty. It is my custom to leave the tampon in place twenty-four hours then remove it. If not yet sufficiently dilated pack again and let that remain for a similar period. This will usually produce sufficient dilatation to make the uterine cavity accessible. At these later periods we frequently have considerable difficulty in removing the retained placenta. Probably the best method is to introduce the hand into the vagina and one or two fingers into the uterus, and strip the placental tissue and membranes from the uterine wall, but this cannot be done without an anaesthetic unless the woman has a large vagina, and the cervix is well dilated. In these cases the spiral curette is not so well adapted to the work because the size of the uterine cavity is such that the edges of the instrument do not come in close contact with the uterine wall, and the placental mass is so large that the instrument cannot well engage it in the coils. However, the large spiral curette has been of considerable assistance to me in these cases in breaking up the mass, and rendering it more easily removed with the placental forceps. This is a class of cases in which the placenta forceps is an instrument of much value.

In all cases requiring the instrumental removal of the placental mass the uterine wall should be gone over carefully and systematically with the small curette to insure the removal of any adherent masses. I always use the dull curette which will do the work well, and is less dangerous than the sharp curette—the latter instrument, however, is the choice of some physicians.

In the absence of infection it is not necessary to use the intranterine douche, or any

other method of irrigation—better not to use it; neither is there any necessity for any packing of the cervix or vagina. The cervix will remain open enough for proper drainage, and the pack or drain can do no good.

Some men have made a rule to keep the woman in bed as many days as she has been pregnant months. I think this is the minimum, and usually they should stay in bed rather longer.

No after treatment is necessary other than attention to cleanliness, unless some complication should arise which is beyond the scope of this paper.

ECLAMPSIA.*

By CHAS. T. THOMAS, Lebanon Junction.

Eclampsia is a condition face to face with which we have all been, and which we especially, of the rural districts, must be constantly prepared to combat, as we represent at his best, the general practitioner who is constantly confronted by the varied ills that beset the entire human unit of the community without the presence of a specialist at our command when serious trouble is encountered. We might then be said to be generalists rather than specialists and as such of course all have a deep and close personal interest in this grave condition, which briefly is characterized by a series of convulsions, tonic and clonic in nature, affecting first the voluntary and then extending to the involuntary muscles, accompanied by a state of unconsciousness or sleep, and is encountered either during pregnancy, labor or the puerperal state. Its frequency of occurrence may be conservatively estimated according to the literature on the subject, as one to five hundred and is most frequently observed in primipara and multipara pregnancies and occurs most often during labor and with less frequency in the puerperium.

ETIOLOGY.

As to the cause one must admit this to be still an unsettled question, the result of which is of course more or less a fight in the dark in our efforts for its control and prevention. It is now rather generally accepted to be due to a toxin or toxins in the blood of the pregnant woman, and very likely derived from the ovum or foetus and these toxins manifest a particular affinity for the liver and kidneys, breaking down these organs and consequently resulting in a virulent toxemia. Not only do these toxins which are retained attack these organs, but the capillaries and general nervous system as well. It has been suggested that the thyroid gland furnishes anti-bodies to counteract this poison during pregnancy and

that its failure in this respect is a causative factor in eclampsia.

SYMPTOMS.

This condition presents a most agonizing spectacle to the attendant; the attack usually being ushered in by the eyes becoming fixed, followed shortly by rapid movements of the eyelids and alae of the nose, accompanied by twitchings of the facial muscles. The pupils are dilated and the head rotates from side to side. From this point of progress the convulsive movements extend to the neck, body and often to the extremities. The body becomes rigid with the back strongly arched; respiration ceases; the face becomes red and swollen and the tongue is bitten by the teeth. With the re-establishment of respiration the air is expelled with a whistling noise. In this stage sensation and consciousness are lost. This may last for a half minute, following which is seen the clonic convulsions which are initiated in the muscles of the face, extending to the body and extremities. In this stage the face is horribly contorted and deeply congested, and the tongue may again be bitten; the saliva becomes frothy and streaked with blood. This period may last two minutes and is followed by stupor which usually persists for half an hour. Such is the picture of an eclamptic seizure and as a rule the attack is followed by others, but may result in death or recovery.

PROGNOSIS.

The prognosis in these cases is invariably grave, the maternal mortality ranging from 20 to 30 per cent, the foetal being in excess of this. The prognosis in the individual case being of course based upon the frequency and wildness of the attacks, amount of albumen and urates in the urine, extent of temperature and blood pressure and also the stage of pregnancy or labor at which the attack occurs.

TREATMENT.

In the treatment of eclampsia, prophylaxis is of paramount consideration, for indeed in a condition the origin of which is so vaguely understood, the axiom "Prevention is greater than cure" is particularly applicable. Indeed, if this were realized and acted upon by the pregnant woman, with the first manifestation of the danger signal, many tragedies would be averted. And at this point allow me to urge upon you the importance of impressing upon every family to which you are medical counselor the value of a regular urine analysis at fixed periods throughout pregnancy even though no symptoms are manifest that may impress the patient of its importance in conducting her safely through pregnancy and uncomplicated delivery at labor. The treatment under the heading of prophylaxis

*Read before the Bullitt County Medical Society.

laxis consists of strictly milk diet, saline cathartics and hot baths. Alternate every other day with the cathartics and baths and let the latter be followed by wrapping in a warm blanket and the drinking of hot milk or water. The patient should avoid lying on the back to avoid is so far as possible pressure upon the ureters and renal vessels. Perfect quiet is, of course, imperative. As to the curative treatment, there is a rather wide divergence of opinion as to just what are the most promising agents to use and it is my desire here to briefly outline those most successfully employed by others as gleaned from the literature on the subject and also that which has been of most service to me after an experience of 30 years' practice.

The patient must of course be dressed as comfortably as possible; her movements should not be restricted other than to prevent her from falling from the bed and a pad should be placed between her teeth during a seizure. The bowels should be freely moved, preferably by a one or two drop of croton oil placed well back upon the tongue in a little butter. Diaphoresis by the use of hot wet packs is often useful when practicable. Chloroform should be given in full doses, of course, during a convulsion and upon the approach of another paroxysm should again be increased. Venesection I deem applicable only in plethoric cases. Thyroid extract is recommended but with this agent I have had no experience. Aconite is recommended as an excellent agent, given in gtts. 1 or 2 of the tincture every ten or fifteen minutes for the first hour then at longer intervals. Morphine has been employed successfully by many, one writer reporting its use in 60 cases with but two deaths. In practically all of these cases parenchymatous nephritis is present, therefore morphine may be used with comparative safety and brilliant results. Chloral and bromides also are used extensively and satisfactorily; it is, however; veratrum viride to which I wish to direct your attention to-day. This drug, given preferably in the form of Norwood's tincture, has, I believe, no equal in the treatment of this condition. Combined with morphine gtts. 5 to 8 of the former to grain 1-20 of the latter to prevent nausea, should be administered hypodermically every half hour in bad cases until its result is apparent, and looked to with confidence for brilliant results. Etheridge reports a case, the worst seen in many years' practice, which, after 14 convulsions, responded with complete cure following a single injection of Norwood's tincture, gtts. 8 in a little water. I simply cite this case as an example of the almost specific action to be anticipated following the administration of this drug. Therefore with the literature available combined with my own

experience, I do not hesitate to say more can be expected from this drug than any other agent. It might be of interest here to differentiate the action of this drug from aconite, with which it was so long classed as a powerful cardiac depressant and vaso-dilator. Wood in recent experiments has shown that its power to slow the pulse and thereby lower the blood pressure is due to its stimulating action upon the cardio-inhibitory mechanism and that the drug is really a cardiac stimulant and does not dilate the vessels as formerly believed. As may be seen there are so many drugs given prominence as *the agent* in the treatment of this condition that if this paper should bring forth the views of the members of this society in this respect it will not have been written in vain. As to the obstetrical treatment, in all cases where labor is at hand the uterus should be emptied with all haste consistent with safety to the mother and child. The mother's safety being always accorded prior consideration to that of the child. It is an undecided question as to whether premature delivery is always indicated when eclampsia occurs early in pregnancy and I believe we should always be guided by our judgment as to the demands in behalf of the mother's safety as indicated in the individual case rather than by any iron clad rule of procedure in these cases.

Bacteriotherapy of Ozena.—S. Massa, in *Wiener Klinische Wochenschrift*, May 6, 1915, says: A polyvalent vaccine prepared from *Coccibacillus ozenae* was employed. The Wright method of computing the number of bacteria was employed; the bacteria were killed by ether. The vaccine was used in cases in which the diagnosis had been determined. At first 100 billion bacteria were given. As no reaction followed, the dose was raised to 500 million. The first changes noticed were active congestion of the inferior turbinate associated with small extravasations of blood—occasionally epistaxis. The day following the injection the white, parchmentlike spots observed in this disease disappeared and vascularization took place. The character of the secretion became thinner and more abundant, and patients who previously could not blow their nose because of the thick crusts found no difficulty in doing so after the injection. The second dose was given after an interval of a week and the beneficial result following it was more noticeable. The first vaccine employed was prepared from three strains of bacteria; later one prepared from six strains was used and the results were still more favorable.—*New York Medical Journal*, January 12, 1915.

COMPLETE AND INCOMPLETE TONSILLECTOMY.*

By J. H. HESTER, Louisville.

I wish to say in the beginning of my paper, that I can offer but little that is new and interesting in the management of our tonsil cases, however, I desire to call your attention to some of the most essential points of this important subject.

The anatomy of the tonsil is well understood; we find the tonsil is situated in the sinus tonsillaris between the faucial pillars, and has its origin in an invagination of the hypoblast at this point. Later the depression there formed is subdivided into several compartments which become the permanent crypts of the tonsil. Lymphoid tissue is deposited around the crypts and thus the tonsillar mass is built up. The inner or exposed surface, including the cryptic depressions, is covered with mucous membrane, while the outer or hidden surface is covered with a fibrous capsule.

The development of the tonsil is very rapid; it reaches the normal size in about one year, and remains this size until after puberty, if no pathological changes take place during this time. It then begins to atrophy, at which time in my opinion, it has no very important function to perform.

The function of the tonsil is not well understood, however, it has been demonstrated beyond any doubt that it has a function and especially during childhood. The function has something to do with the development of the child. Is the tonsil an organ of protection or one of special function, possessing an internal secretion essential to the economy of the organism? Is it an entrance for infection or an outlet for infected material? Is it a receiver and destroyer of germs or an expeller?

We find the tonsil in state of activity at every infection, enlarged and apparently busy, we find bacteria in great masses also, but we do not know whether these are coming or going.

The tonsil may be generators of lymphocytes, they may be places of storing them for ready action, when called upon. A constant stream of lymph from the depth to the surface seems to exist and this alone would be a protecting agent by counteracting an invasion of germs and clearing the surface of undesirable settlers.

All these questions are awaiting a rational explanation. We know of the existence of these processes, but we are in doubt as to the correct interpretation.

INDICATIONS FOR REMOVAL.

First, diseased conditions.

Second, hypertrophied or enlarged tonsils.

Of course, the tonsil is often diseased and presents a hot bed of latent dangers, it contains in the degenerated and enlarged crypts foul masses of decomposed matter; it has ulcers of many kinds, tubercular and other foci, but this is not always the case.

All diseased tonsils should be removed, such as show ulcerations, enlarged crypts, thus offering a breeding place for infected material. It may be small but ragged with deep penetrating canals, soggy, oozing out putrid fluid upon pressure, it keeps up the irritation of the throat, hence should be removed.

I am of the opinion that tonsillitis predisposes to rheumatism, or in other words, I believe that nearly every case of acute rheumatism is preceded by one or more attacks of tonsillitis. Some mighty good men have advised the removal of the tonsils in order to prevent rheumatism.

In repeated attacks of quinsy the tonsils should be removed. Repeated attacks of tonsillitis is not always an indication for the removal of the tonsil, as the majority of the cases are due to nasal or post-nasal obstruction, as for instance, adenoids, polypi, enlarged turbinates or a deflected septum. Remove the obstruction and the tonsils will take care of themselves.

Second, indication for removing the tonsil, is hypertrophied or enlarged tonsils. The size of the tonsil is by no means a pathognomonic symptom. A small tonsil may be more harmful than a large one. I may be mistaken but I am under the impression that the size is considered now-a-days the chief indication for removal of the tonsil. One look decides its fate, it is enlarged and therefore it must be removed. There is no doubt tonsils interfering with respiration, speech or deglutition by excessive size, call for removal.

The organs though slightly enlarged, looking normal and consisting of normal tissue, may in no way interfere with the well being of the individual.

It is no easy matter to decide when a tonsil should be removed. A thorough examination of the tonsillar tissue, proper probing of the crypts, testing of the surrounding organs, detailed inspection of the nose and naso-pharynx ought not to be neglected.

I wish I were able to give dependable directions in a few concise sentences how to determine when a tonsil should come out and how to distinguish between these and other throat and pharyngeal affections, but experience alone will show us the right way.

Tonsillitis is very apt to follow inflammation in the nose and naso-pharynx. It often

*Read before the Bullitt County Medical Society.

follows nasal operations, especially if pus is present. Experiment (Lenhardt) shows that foreign matter injected into the mucous membrane of the nasal passage, will be found in both tonsils a short time after the injection. This indicates a close relation of the tonsils to the organs above.

I notice some writers condemn the removing of a professional singer's or speaker's tonsils. I have removed the tonsils of three professional singers with beautiful results. They all told me afterwards that their voice was better after the operation. The main object in these cases is not to injure the pillars during the operation and to see that they do not adhere following the operation.

Turning now to the removal of the tonsil, I wish to condemn the old operation known as tonsillotomy.

When should we do a complete tonsillectomy?

First, when the patient has reached adult life.

Second, when the patient is a well nourished individual and especially when he has hypertrophied tonsil.

When do we do an incomplete tonsillectomy?

When the patient is a child and poorly nourished. In this class of patients you usually find the tonsil diseased.

To bear me out in this opinion, I have the following statistics to report. I took 25 school children and did a complete tonsillectomy and 25 other cases, in which I left the lower one, one-third, or one-fourth of the better tonsil, being sure to get the capsule of the tonsil as far down as it was diseased. I watched these 50 cases for six months and I found that the undeveloped ones in which I left a part of the tonsil improved much faster than the undeveloped patients in which I did a complete tonsillectomy, on the other hand the well-nourished children in both instances seemed to do well.

My method of doing a tonsillectomy is as follows:

In my adult patients, I prefer the local anesthetic. With the patient in a sitting position I apply 26 per cent. cocaine solution to the tonsils and mucous membrane of the pharynx then I apply a 1-1000 adrenalin chloride solution in the same manner. Five minutes later I make the second application of the cocaine. The solution for hypodermic use consists of:

Rx.

Cocaine Hydro Chloride, 1-4 gr.

Sol. Adrenalin Chlor 1-1000 M. 20

Aquae Dest. Q. S. ad zii.

Prepare fresh at time of using. Inject 20 M of this solution in each supra tonsilar fossa; 10 M in each of the following places: between anterior pillar and tonsil, between

posterior pillars and tonsils and at the base of the tonsil. These four injections to each tonsil are outside of the tonsil in the loose connective tissue which surrounds it. After a delay of five minutes you are ready to proceed.

In children we always use a general anesthetic. I prefer the old A. C. E. mixture, one part alcohol, two parts chloroform and three parts ether. First, because it is less dangerous than chloroform second, because we have less secretion and much less hemorrhage than we do with ether. The contraindications however for the A. C. E. mixture are organic heart disease and where the patient is a poor breather. With the patient completely under the anesthetic, I proceed in the following manner:

With the child on its right side on the table and the mouth gag in place, I put the uvula forceps on and give it to my assistant and he makes gentle traction upward and outward while I put a small two prong hook well into the tonsil. I then make traction on the tonsil bringing it out as far as convenient, then I put my scissors in closed, just above the tonsil and between the anterior and posterior pillars, then I open them and as they are sharp on all edges this gives me a good opening. Then I go down between the tonsil and the posterior pillars: then I open them and as they are sharp on all edges this gives me a good opening. Then I go down between the tonsil and the posterior pillars and anteriorly in the same way. Then the tonsil comes right out of its bed if it is not bound down by adhesions and if I find that it is I go in with my index finger and break up the adhesions. Then I put on the Pierce-Mueller snair and take the tonsil out very slowly by so doing I get but very little bleeding. The other tonsil is taken out the same way.

The uvula forceps serves two purposes:

First, when you make traction it puts the pillars on a stretch and then you get your landmarks. second, you are sure not to cut the uvula off, a thing I have seen done by one of our best men in this country. The hook in my opinion, is far better than the tenaculum, in that you can get the smallest tonsil, without damaging the pillars. Also the tonsil seems to pull out easier, although I realize it takes longer to get accustomed to it, but when you do, you would not lay it down for anything. I like the Boettcher scissors much better than the knife, in that they are sharp on all edges so when you open them up between the pillars they cut both ways and then you do not have to turn the mover to do your dissecting. In this way they are very convenient. The Pierce-Mueller snair is better than the majority of the snairs. in that you can cut the tonsil off very slowly with the screw which is placed on the handle for this purpose.

THE DOCTOR'S FAITH IN GOD.*

By J. W. CRENSHAW, Cadiz.

As the writer sat in the amphitheatre of Jefferson Medical College in his student days, in the clinic of the then greatest American surgeon, there was ushered rapidly on to the operating table a beautiful curly haired boy, about two years of age, in a state of asphyxia, gasping for breath, with a watermelon seed imbedded in the wind-pipe. Rapidly and skillfully dividing the rings of the trachea, pressing the wound apart, and fixing it with retractors, the body of the child was swiftly inverted, and with a shake and slap on the back, the offending seed was thrown with force upon the floor of the operating room. With the coming of the anxiously anticipated relief, came also, the impulsive, but none the less sincere expression of gratitude from the big heart of the great surgeon, as he exclaimed in choking terms, but heard in the furthest corner of the vast amphitheatre, "Thank God, gentlemen, thank God." This pithy prayer, made without studied prelude, from the lips of the great Samuel D. Gross, with the remembrance of the mighty shout of triumph that went up from the appreciative class of six hundred students, gives me the starting point for this brief, and I trust helpful, paper.

THE DOCTOR'S FAITH IN GOD.

In the opening, I am here to modestly, but with firmness, to combat the idea, so often expressed and very commonly accepted, that there is something in the study, if not in the practice of medicine which tends to make the doctor an unbeliever in the one true and only God, and in the Bible as His revelation to men. If there are unbelieving doctors who foster and maintain this idea, I must deny them the right to apologize for their shortcomings behind this specious and utterly untenable plea. For as I see it, from study and experience, the profession which presides at "the incoming and out-going" of life, has the most in it to create an unbounded faith in the God, who did make and does direct the affairs of this Universe. Observation also has taught me, that the greatness of a physician is enhanced in proportion as he recognizes that with all of his skill, he is impotent when confronted with the Divine fiat.

THE TESTING TIME.

There come times in the life of every doctor who has had a wide experience with the anxieties and perplexities of the profession, when he finds himself confronted with conditions parallel to those which called forth the

expression of gratitude from the famous surgeon, quoted in the opening of this paper. A time when the doctor involuntarily burst forth in praise to a higher and nobler power. This may come with some degree to the man of small faith, but to the doctor of rich experience, it brings the greatest joy possible for the human heart to express. At such times he is not satisfied with a consultation with members of the profession, but supplements this with a communion with the great unseen.

THE PHYSICIAN AND THE MINISTER.

This leads me to observe, that the physician who has to deal with the most sacred confidences of the home circle, and who from his intimate association knows "the skeleton in every closet," should be as faithful to and as conscientious in his calling as the man who occupies the sacred desk, and with the Bible before him, presents its teaching with faithful fidelity. I therefore offer no apology for placing the doctor of medicine along beside of the Christian minister; for the physician need not be any the less a preacher of righteousness because he is a healer of the body. The greatest of all physicians, was also the greatest of all preachers. Please do not lose sight of the fact that I say "Christian physician" and upon which I lay especial emphasis; for when the doctor of medicine is lewd and lascivious in his private life, and prostitutes his high-calling for gain alone, or becomes a destroyer of the unborn and is a professional abortionist, he puts himself in the class with the bawdy-house pimp, the white slave trafficker, and the debauchees of innocent girlhood. There is less excuse for immorality in the private life of the members of the medical profession, than that of any other, not excepting that of the Christian ministry.

To what other class is presented daily physical evidences of the result of intemperance, of immorality, of decaying flesh on living bodies? To what other class is there given such knowledge of the human body, of what it is composed, how it is controlled, and regulated? To what other class is there the necessity for clearness of thought, of act, of deed, so positively presented as to the over-burdened doctors? The very highest incentives are offered to the members of the medical profession.

Recognizing that the practice of medicine is a calling out of which the physician has a right to expect a support, and from which he should be permitted to lay up a competency for a later day, we should keep in mind also that it offers the widest field for Christian charity. Another thought worthy of emphasis is, that the hour of the "out-going" of

*Read before the Christian County Medical Society.

human life, at which the minister is expected to bring comfort to sorrowing hearts, is not so sacred as the "incoming" when the doctor is the good genius. The end of one's passing is of small moment, for the life has been lived, the record has been made; but the hour of birth has its possibilities before it; life combining the human and the divine. Happy is he who can preside on such an occasion with clean hands and a pure heart.

THE DOPE DOCTOR.

To relieve suffering is one of the most sacred duties committed into the hands of the doctor. I know of none other obligation demanding the wisest discrimination and painstaking care. The appeals that come are often the most persistent and tantalizing. Happy is the medical man who can say at the close of his career, that I have never taught any one, the lesson "that happiness might be bought for a penny, and carried in the waistcoat pocket," or that "peace might be sent by the mail" to use the classic language of DeQuincey. Happy indeed is he who can say "I have never to my knowledge made a dope fiend." But that the "dope doctor" has been "abroad in the land," with the handy hypodermic, the censoring of the profession just at this time under the Anti-Narcotic Bill, bears annoying and painful evidence.

PROPRIETARY AND PATENT MEDICINES.

America has been called "The Paradise of Patents." For the immense fortunes that have been accumulated by the proprietary and patent medicine combinations, the promoters owe a debt of gratitude to the members of the profession, that will never be revealed until the victims file their complaints at the opening of the books of "the recording angel." The course pursued is not so much a reproach upon the integrity of the doctors, as a reflection upon their common sense and business acumen. While enriching the manufacturers, the dispensers have gained little and the patients have been made "poor indeed." The "proprietary prescribing habit" has been as fatal to the best interest of the doctors as the "dope habit" has been destructive to the health and happiness of its unfortunate victims.

THE AMERICAN MEDICAL ASSOCIATION

On the "firing line" and in the "fore-front" of the battle in meeting the evils referred to in my last paragraph, has stood the American Medical Association with its "best *Journal* in the world." With a full knowledge of the mistakes complained of, and that may have been made, I still believe, that these two combined agencies stand for that which is highest and best in the profession. The lead-

ers have made a fight against odds, that would have discouraged less determined men. The general public and the rank and file of the profession, will never know what they owe the Association and the *Journal*, for the efforts put forth to protect them from the most mercenary gang that ever infested a free country. Entwined with the very warp and woof of the political organizations of the country, having for their champions some of the most prominent men in public and political life, it has demanded the soul and sinew of the American Medical Association to dislodge them and to provide the public and profession the protection to which they are entitled; and while much has been accomplished, the "end is not yet." It has been a mighty "man's job," and will demand the very best efforts of our strongest men.

I close these reflections with a plea to each of you present, to lend yourselves to the encouragement, endorsement, and support of the American Medical Association and *The Journal* and its efforts to uphold the dignity of the profession.

If what I have said along the lines of religion, morality, cautiousness, and fidelity to the highest ideals of life, shall have added to the sum-total of a higher standard of living and inspired any one to a nobler purpose, then the object that I had in mind, when I accepted a place on your splendid program will have been accomplished.

AMENDUM.

Since completing this paper, two incidents have been called to mind, illustrative of the points that I have endeavored to emphasize.

PRESCRIBING PROPRIETARIES.

Having a patient, who I thought needed the attention of a "specialist," I sent her to a city doctor. While under his care, she presented seven prescriptions at intervals furnished by this distinguished gentleman. All seven prescriptions were for "proprietary remedies." I asked a friend how he accounted for this, and whether he thought that the doctor was getting a "rake-off" or was in any way financially interested in the combines. His reply was, "He is wealthy and above reproach." How do you account then? "Down-right laziness" was his laconic reply. Too indolent to write a prescription.

GOOD WORK OF THE ASSOCIATION.

Recently the daily and weekly papers of Kentucky, have been selling space, in a most flagrant manner, to an outrageous quack. *The Journal of the American Medical Association* in the issue of June 5th, has a write-up of "Tanlac" with an expose of the promoter. The chemist report is worthy of more than a

passing notice. Containing nearly 16 per cent of alcohol by volume according to the report, makes the stuff a fine drink for a blind-tiger territory, and furnishes another good reason why every doctor should stand by the "Propaganda for Reform."

Dr. A. T. McCormack, Secretary of the State Board of Health, is trying to revive the indictments which were filed away at Lexington against the man who is at the head of the company pushing the fraud business.

DYSENTERY, OR ILEO-COLITIS.*

By E. T. RILEY, Trenton.

An acute inflammation of the mucous membrane of the large intestines either catarrhal or croupous in character. Catarrhal dysentery may occur at any age from birth to puberty, but is most frequent from the first to the tenth year. Sex has no influence, neither has the race. It occurs under all social conditions from the highest to the lowest, but is more prevalent among the pauper and the laboring classes, it is more frequent in the city than the country. The liability to dysentery is increased by such vices as tuberculosis, congenital syphilis, warm climates, errors in diet, impure drinking water, and several other causes, such as during the period of the eruption of the deciduous teeth.

Morbid Anatomy. The lesions of catarrhal dysentery are usually confined to the lower part of the colon, and even into the ileum. The congested mucous membranes varies in color from a bright red to a dark purple, it is usually covered with thick, tenacious mucus, the large intestine is usually empty, while the small intestine is distended with gas, and contains a greenish fluid. Ulceration may take place. The ulcers at first are round and superficial, but soon enlarge, their edges are everted and flattened and irregularly shaped. Patches resembling pseudo-membrane may also be found. Perforation and peritonitis, which are seldom seen may result. The liver, which is usually congested, may be the seat of multiple abscesses; may also have some oedema of the lower extremities.

Symptoms: The onset may be sudden, without any premonitory symptoms, with one or more chills, or preceded with diarrhoea, temperature is usually elevated, loss of appetite, and nausea, the pulse becomes rapid, small, and compressible, the strength is rapidly diminished; the face presents a pinched and anxious expression. The tongue is moist and covered with a whitish fur, there is seldom pain on pressure, there is a constant desire to go to stool, with pain and straining,

and the stools, which at first contain fecal matter, soon become small, odorless, and consist of blood, mucus, and pus.

As the inflammatory process advances to ulceration the stools contain shreds, resembling washed, raw meat, mingled with pus and blood. The straining now becomes more severe, and prolapse of the rectum frequently results from same. The abdomen becomes tympanitic and tenderness marked along the whole course of the colon. The tongue becomes dry, with brown center and red margin. The pulse becomes rapid, thready, and intermittent. The respiration becomes sighing, the eye lids are partially closed, and the pupils are widely dilated, the child becomes restless, and tosses from one side of the bed to the other, and delirium or convulsions may be present. The urine is high colored and scanty, or there may be total suppression.

Diagnosis: The blood stained stools, tenesmus, abdominal pain, and the history will aid in distinguishing dysentery from other enteric conditions, the variety of the disease may be recognized by the symptoms.

Treatment. There is a great deal that could be said about the treatment of dysentery, and I will take up very little of the society's time in relating my own treatment from same, and am willing to leave it to the discussion of the society.

The patient should be confined to bed even in the mildest attack and if possible use the bed pan and thoroughly disinfect the discharges with chlorinated lime.

The child should be bathed once a day, and oftener if the weather is warm, if circumstances compel him to remain at home, he or she should be placed in a room where pure, fresh air will be admitted freely. An occasional sponge bath of equal parts of alcohol and water will prove beneficial; if your patient is a baby the diaper should be removed as soon as soiled.

The hygienic surroundings should be looked after and watched after every day. The diet should be prescribed in the very beginning, and be positive with the family or nurse; we may use the peptonized milks, beef-tea, beef-juice, or mutton broth, these should be given in small quantities at frequent intervals, so as to not over-feed.

Local Treatment: The most rational treatment of dysentery is intestinal irrigation, washing out the colon and rectum, thereby relieving the pain and straining to some extent, and this is best done by having a continuous flow, and should use a double injection tube, and should be very careful in introducing same as it will sometimes cause a great deal of pain, and you should have your patient placed on his or her left side with hips ele-

*Read before the Christian County Medical Society.

vated higher than the body and the knee and chest position is still a better way, and would advise the physician to always give the first one, and the frequency of the irrigation is governed by the number of stools or actions would use either hot or cold water with some antiseptic in same, such as mercuric chloride.

Medical Treatment: I use ipecacuanha, giving large doses, 5 to 30 grains in milk, and especially where we have greenish stools, mucus and blood. Castor oil as a mild catharsis given in small doses every hour for a few doses. Magnesium sulphate is good in acute form where we have pain, straining, and stools containing blood. Opium as enema with starch and milk, after the canal has been emptied with saline or irrigation, may use silver nitrate, gr. 1-4 to 1-2 after acute symptoms have subsided. Bismuth subnitrate and subgallate may also be given every few hours, quinine if there is any malaria. Mercury in small doses. And a great many others that I might mention.

INVERSION OF THE UTERUS, WITH REPORT OF A CASE.*

By G. C. RANKIN, Walton.

My principal reasons for offering this paper this evening is, first, to comply with a request of our distinguished President, Dr. Hayes and secondly to furnish the incentive for a discussion which I sincerely hope will prove of more value to all of us than the paper.

The case that I am about to report is the first seen in my limited experience. Notwithstanding the fact that most of the authorities hold that the inverted uterus is the result of a misconducted labor, I am not willing to hold myself responsible for the condition that arose in this case.

Inversion of the uterus may be complete or partial. In complete inversion the organ is turned inside out and upside down. In partial inversion it presents a cup-shaped depression of greater or less depth at the fundus.

Frequency: Fortunately this accident is exceedingly rare. Winkle had never seen a case of complete inversion of the uterus in 20,000 cases of labor, nor had Braun in 250,000. In 192,000 cases at the Rotunda Hospital in Dublin, covering a period of nearly a century, one case was reported. Jewett says it is believed to occur once in 2,000 cases of labor. Inversion of the uterus, seldom takes place except at term, yet we have records of cases complicating miscarriage at six months.

Woodson reports a case of complete inversion following a miscarriage of four months.

Varieties: The inversion may be acute or chronic, the latter will not be discussed in this paper. There are three degrees of acute inversion recognized:

First: A cup-shaped depression at the fundus, the latter not engaged in the os-uteri.

Second: Partial inversion, the fundus protruding from the os. This is a true intussusception.

Third: Complete inversion, the uterus being turned inside out.

Etiology: All of the writers agree upon the fact that in the absence of atony or paresis of the uterine muscle, inversion is impossible. Crampton says that inversion is preceded by paresis of some portion of the uterine muscle, not necessarily at the placental site, the main causes being too frequent child-bearing, tedious labors, repeated miscarriages and traumatism. For traction upon the cord or pressure upon the fundus to produce inversion in the absence of paresis would be impossible, in the former the cord would brake, in the latter the pressure would have to be so great that surely no sane man would be guilty of. The inversion may be spontaneous. When the placental attachment is at the fundus an atony at this point may cause a dipping down at the fundus and the beginning inversion may be increased by the weight of the placenta if still attached. The inverted portion now acts as foreign body and being firmly grasped by the non-paralyzed segment of the uterus it is carried down at each contraction of the organ. The accident may occur by undue pressure upon the fundus. A common cause is believed to be traction upon the cord, shortly after the second stage of labor is completed not allowing firm contraction to take place.

Symptoms: The usual symptoms of inversion are pain, hemorrhage, vesical and rectal tenesmus and profound shock. The intensity of the symptoms vary greatly in different cases, ordinarily the pain is severe and is referred to the lower abdomen and pelvis. The hemorrhage may or may not be severe, depending upon the degree of relaxation of the uterus.

Diagnosis: As a rule the acuteness and severity of the symptoms are such that can scarcely fail to arrest the attention of the physician should he be present when the inversion occurs. The absence of the usual abdominal tumor, the presence of an intra-vaginal tumor and the character of the tumor. It must however be differentiated from uterine polypus. In uterine inversion the implantation of the pedicle is circular, while in polypus it is lateral. Sometimes it is possible by

*Read before the Boone County Medical Society.

the aid of the speculum to detect the opening of the Fallopian tubes. The possible presence of the placenta still adherent may be borne in mind.

Prognosis: Death may occur within a few hours from hemorrhage and shock or later from septicemia. The total mortality may fairly be stated from 25 to 35 per cent.

Prophylaxis occupies the same place in this condition as in all others, the old maxim holding good 'an ounce of prevention is worth a pound of cure.' Avoid traction upon the cord while the uterus is still relaxed, and of manipulation which may indent the fundus, and finally of properly directed efforts to bring about a prompt and persistent retraction of the uterus. The hand should be kept upon the abdomen over the anterior surface of the fundus, from the moment the child is expelled until retraction is complete, so that the slightest dimple at the fundus may be noticed and reduced.

Reposition: There are three methods of employing taxis in the reduction of a recent inversion of the uterus. The first consists of grasping the fundus of the uterus in the hollow of the right hand and making gentle but firm pressure upward in the axis of the pelvis. In the second method the hand is carried into the vagina with its back toward the uterus, and with the fingers part of the uterine lateral wall is pushed upward through the constricting ring. With the fingers of the other hand applied over the abdomen the cervical ring is dilated. As the ring yields the lower uterine segment and finally the entire body of the uterus, is pushed upward through the cervical ring. The third method consists in making alternating pressure at the middle of the fundus with the coned fingers. Reduction of whatever method should not be undertaken without the use of an anesthetic. Should the placenta be attached to the uterus it should be separated before reduction is undertaken. Reduction should be done as early as possible, but the fact that the uterus has been inverted for several days does not contraindicate an attempt. If the uterus is infected, early amputation is generally advisable.

I was called to see Mrs. A., on April 20th, of this year, age 22, occupation housewife, one pregnancy two years previous, never miscarried. She was anemic, a very delicate woman, with an inherited tubercular predisposition. After the usual preparation for the conduct of a labor case I proceeded to make an examination. I found the cervix well dilated, left occipito-posterior presentation, a good roomy pelvis. Labor pains strong, occurring at intervals of every two or three minutes. In fact, everything normal. The first stage of labor

being completed in a very short time after my arrival, the second stage of labor was of very short duration, the child born with the cord wrapped around the neck some two or three times. There was no laceration of the perineum, child weighing eight pounds. After ligating the cord I placed my hand upon the abdomen and noticed a small depression at the fundus but did not realize the significance of it at the time. There was no hemorrhage at this time. As usual during the time between the second and third stage of labor (in this instance which was at least three quarters of an hour) I sat down and engaged in some frivolous talk with the ladies that were present. I then proceeded to terminate my case by the delivery of the placenta, by placing my left hand upon the abdomen and using the Crede method of delivery, still noticing the dimple which was very small. After gentle manipulation all at once the uterus left my hand, upon raising the sheet I found the uterus completely inverted with the placenta still adhered. When the placenta began to separate there was a violent hemorrhage, almost uncontrollable. The treatment instituted to meet the emergency was not what would be employed in a well regulated hospital but certainly was effective. I grasped the body of the uterus with both hands and made firm pressure, my only assistant in this case at this time was the husband and I had him wash up and relieve me, as our hemorrhage was pretty well controlled. I then put the uterus in the vagina and attempted to reduce the inversion, which I found I could not do as I was very delirious at this time. After failing to reduce I packed the vagina with ice. I then proceeded to combat shock by raising the foot of the bed and giving strychnine hypodermically and using hot water bottles. By this time my delirium began to subside. I then realized that my patient needed a doctor and had Dr. C. N. Paul called hurriedly, and he very readily reduced the inversion. This woman made an uneventful recovery, the treatment being the same as any other case during the lying-in period with the single exception of saline being given per rectum.

I am of the opinion that the causes of the inversion in this case was due first to the general relaxation or rather lack of muscular tone, second when the child was born with the cord entwined about its neck, traction was made upon the placental site causing the dimple in the fundus above referred to. I do not believe that hardly any general practitioner would have attached any significance to the depression in the fundus.

PYLORIC OBSTRUCTION.*

By W. A. BRYAN, Nashville, Tenn.

It is not the purpose here to argue falsely that any man who has a mechanical turn may not learn to do a gastro-enterostomy successfully so far as technic goes; but to say that a vast amount of experience and skill are required to know just when, in the midst of the ever-varying pathological pictures presenting in the upper abdomen, gastro-enterostomy offers the best net results to the patient. Too many gastro-enterostomies have been done, are being done now, and, as all who have taken pains to study surgical therapy of stomach lesions in their end results, with too few cures and too many cases made positively worse, having swapped the devil for fire.

The diagnostic skill that leads these cases of stomach surgery to the operating table, requires to be of the first order. It requires patience to make a correct diagnosis of stomach lesions: often enough it cannot be done at all; but patience is always necessary unless the case is so well advanced that the traditional wayfaring man could recognize it at once. If it is diagnosed in time, not only must patience be employed, but a lot of work, a careful examination, often repeated examinations, physical, microscopical, chemical, X-rays, and a most careful history of the case in which the ill advised and deceptive word, *indigestion*, is not permitted to enter, unless with the most precise definition. I am pretty safe in saying that, from a surgical standpoint, operations on the stomach present relatively about the same order of difficulties that the diagnostician finds in his efforts to unravel the long and fluctuating symptoms he meets in his examination of stomach patients.

The subject of this paper has been chosen not because it is the easiest phase of surgical stomach pathology from a diagnostic point, although it is unquestionably, but because by studying pyloric obstruction, we may gain a broader conception of the various phases surgical relief may be required to assume, than from any other single condition.

The rule is, that pyloric obstruction conveys the idea of a cicatrix or ulcer, or cancer, representing the pathology present, and gastro-enterostomy representing the relief to be offered. As far as it goes the conception of the pathology is correct, but it falls woefully short of the facts; and the treatment goes too far, for pyloric obstruction does not signify by any means that gastro-enterostomy is the only surgical treatment.

Pyloric obstruction means any condition primary or secondary, that so affects the outlet of the stomach as to retard or prevent, partially or completely, the escape of stomach contents. No doubt, there are numbers of cases of pyloric obstruction so mild as to produce no symptoms, or to produce symptoms so mild that no mechanical relief is required. The conditions which commonly interfere with the passage of food through the pylorus are: (1) Congenital stenosis; (2) Ulcer, with or without marked infiltration and situated either within the pylorus or on the gastric or the duodenal side, or on both sides as in the saddle ulcers; (3) Stricture, resulting from previously healed ulcer; (4) Cancer, primary or secondary; (5) Other tumors within the wall of the stomach, or pedunculated intragastric tumors, or tumors in organs adjacent to the pylorus and either invading it, or pressing upon it from without and permanently collapsing its lumen; (6) Adhesions due to adjacent inflammatory processes, which usually obstruct the pylorus by drawing it away from its normal anatomical position; (7) Congenital bands; (8) Gastropexia, which not only requires the stomach to lift its contents to an abnormally high level for expulsion, but also causes it to be so ill-shaped that the outlet becomes inadequate; (9) A form of acute obstruction, if it be obstruction, which comes up in individuals without a previous history of gastric disturbance and passes away without the need of surgical interference. I am frank to admit my ignorance of the nature of this condition.

If we omit the last condition of the above group of nine, which is acute, apparently non-surgical, which is rare and could not possibly be confused with the other eight forms of pyloric obstruction, I think we would be conserving the best interests of our patients to say that all the first eight conditions should be relieved surgically, at least after a course of treatment of a few weeks has failed to give relief, and always when a history of recurrence is to be had. All of them, if we omit ulcer, should be subjected to surgery as soon as possible, for delay can only mean decrease in the immediate risk of recovery and the remote risk of cure. It is by no means certain that an exception should be made of ulcer, for the chance of complications and sequelae which may at any time pass beyond our control, probably far outweighs anything that might be gained by a temporizing, procrastinating course. When we advise non-operative treatment of gastric or duodenal ulcer, it should always be done after weighing well the part that perforation, hemorrhage and cancer may play in our ultimate prognosis.

1. The possibility of a stenosis in new-

*Read before the Warren County Medical Society

born children, that may not only interfere with normal development or cause a loss of weight, but cause death soon or late, slowly or rapidly, should be borne in mind by every obstetrician and pediatrician and by the general practitioner and surgeon as well, for I think surgeons are quite as prone to forget things as any other members of the profession, although of all men it is he who imagines himself least capable of forgetting. The habit of young infants to vomit, is a deceptive sign in these cases and the consultant is likely to forget that it may occasionally mean something much more serious than an overloaded stomach. The baby with a normal stomach and an abnormally large food supply vomits; but always vomits less than he ingests: this baby gains weight and has normal function. Reduction of the amount of food taken stops the vomiting. The baby with stenosis, however, vomits more of the ingested food in direct proportion to the degree of stenosis, but does not retain enough to keep its weight increasing and function normal. It may even vomit as much as it takes into the stomach. It does not void a sufficient quantity of urine, because the liquids do not enter the blood in sufficient quantity. This is true only in complete stenosis; otherwise we call it, because the food does not enter the intestines in quantity sufficient to assure bowel movements of normal amount and frequency. We have doubtless permitted many such cases to escape us in the past. The remedy is purely surgical, namely the performance of gastro-enterostomy. Its success depends very largely upon the degree of inanition reached before the operation is undertaken.

2. Ulcer is so comprehensive a subject that one can scarcely touch upon even a narrow phase of it in the narrow limits imposed by its position in this paper, namely as a factor in the etiology of pyloric obstruction.

It may cause obstruction in any possible way; the facts, if not the urgency of treatment remain the same. I am not supposing that it will bleed or perforate or become malignant just here, but simply that it is interfering with the passage of gastric contents into the duodenum. The imperativeness of action in a given case may be emphasized by the recognition of one of these complications, and the line of treatment may be materially altered by their presence. But suppose we admit simply obstruction without any untoward complication. What is to be done? Surgery or medicine? The cause of the obstruction may be inflammatory infiltration and edema of the tissues affected or it may be cicatricial stenosis. The former may be relieved by cure of the cause, or the ulcer by internal measures, but it is difficult to understand how the hardened cicatrix, the result of

years of ulceration and inflammation is to be relieved by such measures. If the case is not too urgent and if rational internal measures have not been employed, I think they should have a trial; and this means a trial with the same attention devoted by the patient and physician toward getting a cure that would be employed were it a surgical case. Otherwise, it is not a trial; and internal medicine has lost many a laurel and much of her glory by compromising between the necessities of the case and the demands of the patient. Men do not recover from ulcer of the stomach and attend to their business affairs at the same time. It is impossible and it's a shame to take the money. Let us treat him if we pretend to, put him to bed and regulate his diet and his habits and study the needs of the case and satisfy them. Short of this is mockery. If this cures him, not if it improves him, if it cures him all is well. If it fails, if the ulcer recurs, if hemorrhage occurs, if perforation occurs, or if it is feared, and by all odds if cancer is even suspected, the case is surgical. But this is not saying much in the light of our present status of surgery for ulcer. Ten years ago gastro-enterostomy was the finest feather in our plumage: we were so surprised that it really could be done, so hopeful, so certain that it would cure all ulcers. To-day, we know that gastro-enterostomy is one of the real things of surgery, really beneficial, we know what it will do and what it will not, and one of the things it will not do is to cure ulcer invariably. I hate to admit this, the operation is so beautiful, the theory so splendid; but it will not and honesty compels me. I do not deny that it has cured ulcers, that it has benefitted others, that it will benefit and cure yet others, who will call it blessed: but the past ten years have taught us much and one is this thing of the fallibility of gastro-enterostomy. We have learned that there must be a man with brains behind the gastro-enterostomy, not a machine, who can apply it to the right cases and who has sufficient self control to refrain from its indiscriminate, indiscreet use. It is granted nothing else can be done in certain ulcer cases, still I am one of those who believe that where it can be practiced, excision of the ulcer is far preferable, because it adds a very little to the mortality in the hands of those who know how to do stomach surgery, because it removes the chance of hemorrhage, of infection, of perforation, of cancer, and this gain assuredly is sufficient to affect the one or two per cent. increase of mortality; especially if we recognize that excision cures the ulcer and gastro-enterostomy not only may not do so, but frequently is the cause of establishment of new ulcers whose cure lies out of the domain of surgical therapy.

In all these ulcer cases we should not forget when our operation is finished, when the wound is healed and the patient dismissed, that there were certain causes active in the production of the first ulcer, errors of diet, foci of infection, and that their continued activity may serve to cause a second ulcer. Hence, they should be supervised for a long time after cure and directed along the safest course for the maintenance of their reestablished health.

3. Stricture, by which I mean a cicatricial stenosis, resulting from an inflammatory or ulcerative process, is very simple from the standpoint of treatment, since it is the one condition which probably offers the best result from gastro-enterostomy. This result is ideal only when the pylorus is occluded: hence, when the pylorus is only partially occluded, it must be blocked by artificial means if ideal results are to be obtained, for the stomach is as set in its ways as an old maid, and refuses to permit anything to go the wrong way so long as the old path will admit the passage of even small amounts of its contents: the consequence is that the new opening gradually narrows until its patency is lost. Under certain circumstances Finney's pyloroplasty is better adapted than anastomosis and excision is to be done if there is any question as to the possibility of malignancy: and if it could be done just as safely I should have called this the ideal treatment for pyloric stricture. A slight improvement in the technic will give it precedence.

4. Cancer of the stomach when primary is to be considered from three standpoints by the surgeon, first, prevention; second, cure; third, reestablishment of the stomach outlet: when it is secondary, it is to be considered only from the third point of view just mentioned.

From our present ignorance concerning cancer we are safe in asserting that the best way to reduce cancer mortality is to prevent it, to remove the precancerous lesions and to do radical operations early, which being interpreted means that we are to forget and to unteach at least half of what we think we know of cancer. We must know and we must teach our patients that when cancer of the internal organs is far enough advanced to produce a palpable tumor, it is already too far advanced to save more than a very small percentage of cases. We should remember that cancer of the stomach represents approximately one-third of all cancers. This is somewhat discouraging from a diagnostic standpoint, for I am sure we do not diagnose one-third our cancers as arising in the stomach: more's the pity, for the infallible test to prove

diagnoses is the operating table and the post-mortem, and they reveal the fact.

Prevention of cancer of the stomach may be briefly summed up in the statement "cure your gastric ulcers and if operation is necessary, excision is the better plan," for it not only removes the ulcer, it avoids the presence of a scar, the tendency of which to produce cancer we know in general, and especially in this great cancer organ.

The second item of cancer of the stomach is its cure by excision and the same rules of cure obtain here as elsewhere for operative relief of cancer, namely total excision of the growth. This sounds simple enough, but probably nine-tenths of the cases come too late. They have doctored themselves for indigestion into that realm that lies just beyond the point of curability, from which no traveler returns. Let me repeat, what I have hinted at already, that any case that has an intrinsic stomach lesion and fails, under correct treatment to show definite improvement or positive cure after six to eight weeks of intelligent treatment, and any case having so improved, if a relapse or a regression occurs, will do himself the greatest blessing to have the abdomen opened. They argue, "maybe it won't hurt me." Maybe dynamite won't explode.

The third phase of cancer of the stomach, producing pyloric obstruction, is that in which secondary growths interfere with the outlet. They are either metastatic or the direct invasion of the stomach from more or less remote tumors, the most interesting of which is cancer of the breast. I have seen a woman conceal a mammary scirrhus for ten years and then reveal the presence of her trouble only when the pylorus refused longer to open. Gastro-enterostomy gave her thirteen more months of life and comfort. We must, as a profession, learn not to cast our incurable cancer cases aside hopelessly: but must add to their comfort and their expectancy, for it is not our whole duty to cure. In these cases the operation is intended to reestablish a gastric outlet at a point as far removed as possible from the advancing margin of the tumor.

5. This item of non-cancerous tumor causing obstruction demands but little attention in the first place because they are exceedingly rare, and in the second place because treatment consists in removal of the growth whether pylorotomy is or is not necessary.

6. This group has proved to be a rather important one in my experience, for the number of such cases has been relatively large. The adhesions are usually due to pericholecystitis or to peritonitis resulting from perforation of the gall-bladder, which is itself, I believe, of more frequent occurrence than we usually suppose. The treatment of pyloric condi-

tion must be determined by the findings on entering the abdomen. For in one instance the adhesions are of such nature that the right end of the stomach may be replaced to its normal position and fixed there securely and maintained in a state of patency. If this can be done, it is the correct course to pursue: we should by all means avoid getting gastro-enterostomy mania. If the normal channel cannot be restored with certainty then we should make certain, as certain as we can, that it is rendered permanently functionless, and a gastro-enterostomy done. It cannot be impressed too often or too firmly that surgeons should never trust two outlets to the stomach, for it will surely make trouble; the stomach cannot serve two masters: it will hate the one and love the other.

7. I have seen only one case belonging to this division, and have so far not read or heard of another. I will therefore, report the important facts in the case. A young woman, single, age twenty-two, had had occasional vomiting spells as long as she could remember. At last a very protracted one came on and lasted for months, incapacitating her for her work and rendering life miserable. She vomited every variety of food or drink ingested. She lost weight continuously for this period of months, although some food must have passed to the intestine; otherwise she could not have lived. Examination revealed nothing: test meals nothing except the known fact that food would not remain long in the stomach. The contents were normal. Exploratory section revealed a narrow band one-eighth of an inch wide, lying across the pylorus, leading from the gastro-hepatic to the gastro-colic ligament. It was removed and complete cure obtained.

8. Gastropotosis has usually been passed by with a sneer and a diagnosis of neurasthenia, whatever that may be; frankly, I believe it is a figment of the doctor's brain, nothing. But this is rapidly developing into one of the most fruitful and grateful fields of surgery, and the number of invalids now riding from mountain to sea-shore, from continent to continent, from clinic to clinic, with no benefit is legion. Now do not understand me to recommend surgery for this condition of ptosis when it is symptomless, it will require a hundred years of busy work for surgeons to relieve those who are suffering and who are being comforted by serious sounding statements that it is hopelessly a case of nerves; then it's more sea-shore, another spring and a course in peanut butter and bull. But I am wandering afield: only one little item in ptosis concerns me here, namely that which has as one of its symptoms, nay, as its most important symptom, obstruction to the outlet of the stom-

ach. We will discard all other symptoms and their relief and all the sympathy and lies that may be wasted in attempted psychic treatment of this form of neurasthenia, and devote our attention to the patient whose stomach lies at the bottom of the belly instead of at the top and thereby has to lift the contents back from the pelvic floor to the normal site of the pylorus and then find the latter collapsed by sheer dragging of the descended stomach on its fixed attachments. Then the stomach dilates. They tried gastro-enterostomy on these cases and failed until finally it dawned on somebody that the stomach might be replaced and held in position and the trick was done. I may add that in such cases the cause consists in one of two factors, or both. In one, the virginal type, there is too little room in the lower abdomen where the stomach does not belong. But I cannot enter here into the details of operative treatment. Let me simply add that it will be a little while yet before even the surgeons are convinced of the efficacy of the treatment, but there are enough who have faith to prove the results.

9. I shall talk a moment of a condition of which I know nothing certain. It is not a surgical condition apparently. My statements are based upon two cases. The patients who have not been operated upon, and in whom no cause is revealed by immediate or subsequent examination. One of my cases occurred in a young man who had a severe organic heart lesion: the other in a young woman in perfect health. They did not vomit, and their one symptom was distress from the dilated stomach. Physical examination showed nothing but a dilated stomach, which in the young lady's case was so large that it filled the abdomen, extending from ribs almost to the pubis. Emptying the stomach with the tube confirms the diagnosis and at the same time seems to effect a cure.

Significance of Pain in the Right Side in Young Women.

—Dr. Randolph Winslow, of Baltimore, states (Southern Surg. and Gynecol. Assoc.) that unless the symptoms of appendicitis in young women are frank and clear, the condition is probably something else. Pain and tenderness in the right side, without rigidity, elevation of temperature and leucocytosis is usually not appendicitis. Apparently severe and long-continued pain in the right side in girls is more likely to be neurotic than appendicular. Pain may also be reflected from the pelvic organs or some of the other viscera, and the primary seat of the disturbance may be determined by a more careful examination. The author thinks we frequently operate too hastily after a diagnosis of appendicitis, without considering sufficiently the other possibilities in a case.—*American Medicine.*

SKIN GRAFTING AND REPORT OF CASES.*

By WILGUS BACH, Jackson.

As early as 1847 Dr. Hamilton devised a plan to cover a surface denuded of skin, by using a pediculated flap and trusting to nature that the flap would act as a nucleus to form more skin and cover the area. As time progressed various means have been used to accomplish a successful operation for grafting, some methods dating back many years, while others are quite recent discoveries.

These methods which are described as follows, have been tried at various times and places with a varied degree of success.

Reverdin's method devised in 1869, by which means he cut from the patient's body, the skin to be used, as follows: The surface from which the skin was to be cut was cleansed thoroughly with bichloride, then washing all bichloride away with normal saline. The surface upon which the grafts were to be placed is to be prepared by washing carefully with saline, then scrape away all tissue down to healthy granulations and put on compresses to stop any bleeding that may occur.

A sterilized needle is thrust through the skin and is raised to such a position that the operator may cut the skin to such thickness and size as may be convenient for his use. They are placed upon the raw surface and in such a manner as to allow drainage in case there be any discharge, or in case of death of one graft the others would not be affected.

The wound is then dressed with gutta serena tissue moistened in saline, covered with aseptic gauze which is also moistened in saline, over which is placed a rubber dam, absorbent cotton and bandage.

In 48 hours all dressings except gutta serena tissue may be removed and the wound irrigated with normal saline and be dressed again, within seven days this special dressing may be removed and ordinary sterile dressings applied.

This method does not limit the amount of cicatricial contraction to any degree, and the skin is apt to break down for some time after it has completely healed.

Wolfe's method was to cut the skin slightly larger than the wound, the entire thickness of the skin, allowing the edges of the graft to overlap the skin on the body around the edges of the wound. No fat is to be upon the graft and in case it is necessary to hold the graft in place it may be sutured in place and dressed in a moist chamber. In case the graft dies of course it must be removed.

Olier and Thiersch's method is most followed to-day. Asepticize the wound or ulcer and the site from which the graft is to be removed, by washing carefully with bichloride followed with normal saline so that no mercurial preparation remains.

Scrape the wound and its edges or rub off the granulations with a piece of sterile gauze. Compress the wound to arrest hemorrhage.

The skin to be removed is put on the stretch, and while it is being cut by the surgeon the assistant is to irrigate continually, *the graft* with saline.

A sharp knife or razor may be used in cutting these grafts, but a hollow ground instrument is very unsatisfactory.

The grafts being removed are pressed firmly upon the wound in such a manner as to allow the grafts to overlap the edge of the wound in lattice fashion to allow drainage between grafts, or may be allowed to overlap each other. The method of dressing skin grafts vary according to the surgeons ideas and location of the wound. In some instances I have used the Reverdin's method of dressing while often I find this dressing can not be applied.

I have made appliances of wire netting which was moulded so as to eliminate all pressure and apposition of dressings to the grafts and allowing the nurse to use the saline often without disturbing the wound.

Another method which has been very successful is to apply the grafts, over which adhesive plaster is placed, allowing the ends to reach well on the true skin, the adhesive should be in narrow strips, so that the excretions from the wound will escape between the strips, and the pressure will prevent excessive granulation while the grafts are held continually in their original place. In case this method of dressing is used care should be used and not remove adhesive too early as the graft would stick to the adhesive.

At first it was thought best to graft skin from the patient's own body, later it was found that skin would grow when taken from another individual.

Epithelium from some of the lower animals have been successfully grafted upon patients, and very often epidermic scales when scraped from a patient and placed upon a wound will form new skin.

The methods for obtaining skin for grafts vary according to the surroundings, as well as the views of the surgeon.

1st. The skin may be taken from the patient himself by scraping or cutting with knife or scissors.

2nd. It may be removed from another person or even from lower animals in like manner.

*Read before the Kentucky Valley Medical Association, Winchester.

3rd. It may be obtained from blisters caused by the surgeon for this purpose.

4th. The epithelial surface of placental membranes may be used advantageously.

I have had only a limited degree of success following the methods just described.

During the summer of 1912 I was called to see Mrs. R. C. Gunshot wound of arm in which all of the ulnar surface of the forearm was torn away from the wrist to within two inches below the elbow, and the ulna was entirely gone, only half the skin of the forearm over the radius remained; this I tried to make cover the radius but failed. I did a skin grafting operation about two months later. Ollier-Thiersch method, taken from the patient and was very successful, the skin covered the entire area, and after about two weeks, more than half this skin broke down and it was several weeks before I could get it to form again.

June 30, 1911, a colored man age 35 from West Virginia, came in with a stump of a leg, amputated just below the knee, the flaps had been cut too short, and after retraction the end of the stump was entirely devoid of skin. He refused to allow me to cut grafts from his body but agreed to scraping the skin and I put the epidermic scales on from which skin grew, covering the stump in three weeks which had been amputated two years previous. This is the only successful case from epidermic scales I have had, having failed on three others.

Since June 15, 1914, I have limited skin grafting to one method which I will describe as follows and which produces better results, requires less time, and enables the surgeon to cover larger areas.

The wound is prepared by washing carefully with normal saline, scraping all old granulations away with instrument or gauze, compress the wound with gauze to prevent any bleeding or oozing, and irrigate with normal saline. The surface being prepared, is now ready to receive the grafts which are secured as follows:

All maternity cases engaged, are placed in hospital as near as convenient to the patient to be grafted, and immediately after delivery of placenta it is transferred to the room of the injured person and the membranes removed; being careful to have the epithelial surface always down so that it will be placed upon the raw surface.

The placental skin graft may be cut any size or shape, and is stretched tightly over the raw surface to which it adheres firmly.

I have used this method on a number of burned patients, and in 80 per cent the grafts took nicely.

June 23, 1914, Miss A. F., age 3 gunshot

wound of knee (which occurred several months previous), was grafted with placental tissue. On June 28, when the dressings were removed a large amount of offensive material was removed from the wound, which was about six inches in diameter. I was very much disappointed, because the whole membrane seemed to have slipped away; two days later I found the area of a greyish white color, and within a week, skin had formed over the entire area. This skin did not break down and is now much like the normal skin. The cicatricial contraction was not present and as it has been more than a year since the grafts were made, there is no indication that the skin will not be perfectly normal.

S. N., age 4, male, admitted to hospital on February 27th, 1915. His clothing caught on fire and he was burned from the waist line to an inch below the knees, over the entire surface. The front, being burned over the abdomen and down to the knees I decided to graft first. The child was placed upon his back, legs extended and having in adjoining rooms two maternity cases, I waited for their delivery, which occurred about a week later. The placental membranes were cut into large pieces and placed over the abdomen, front and external part of the thighs, within a week or ten days this had taken nicely, and the child was laid upon his face and the skin was replaced on his hips and thighs with placental membranes, immediately after delivery. And a large apparatus was made to hold all the bed clothes, gowns, etc., away from the wound. The grafts on the back took, the ones on the inner side and back of thighs were scalded with urine or feces and the grafts on front of knees slipped away, so that up to the time the child went home I was never able to get any satisfactory results, as voiding involuntary would cause the grafts to die invariably upon the areas just mentioned. The other grafts were all very successful.

June 1st, 1915 Mr. G. W. L., age 50 was scalded by steam escaping from a valve in a stationary engine, the burn was very extensive and covered the greater part of his hips and also the back of one leg from the knee to the ankle. The placental graft was applied about a week after the burn, and by June 15, the area was entirely covered with new skin.

I am very much pleased with the results obtained but the ones referred to have been successful while I frankly admit that others were complete failures. I attribute the success of skin grafting first, to the proper preparation of the wound to be grafted; second, to the stage of healing the wound has reached before applying the grafts; third, to the selection of the grafts, being sure they have no infection, gonorrheal or syphilitic; fourth, to

the fact that the earlier after delivery the grafts are applied, the better results obtained; fifth, to the care and management after application.

In case the above rules are followed I feel sure that the greater number of grafts will be a success.

REPORT OF SURGICAL CASES.*

By IRVIN ABELL, Louisville.

Case I.

RETRO-CAECAL ADHESIONS OF APPENDIX ORIGIN,
INVOLVING URETER; SYMPTOMS SIMULATING RENAL COLIC.

Mr. J. S. Kenney, Ill., age 37. Father living, mother living, two brothers living, one dead, operation; no sisters. Married, three children living. Had slight attack of fever six or seven years ago. Aside from this gives no history of acute trouble until present. In January, 1913, had first attack of pain in right side; the pain was most intense at a point internal to the anterior spine of the ilium. It radiated into the lumbar region as well as down along the course of the ureter causing retraction of the testicle and frequent efforts at micturition. The attack persisted for twenty-four hours and left him with a distinct tenderness in the right half of the abdomen. He has had three attacks since, all of which have been marked by the above phenomena. Of the four attacks, three have been afebrile; in one the fever reached 101 and lasted for a few hours. Last attack on March 11th, 1913.

EXAMINATION.

Patient is a well-developed man of average height and weight. Temperature normal, heart normal, lungs normal, right lower abdomen shows tenderness on deep pressure. Examination of urine revealed a trace of albumin, many blood cells and pus cells. Patient states that between all attacks no vesical irritability is noted. X-ray examination by Dr. Keith negative for stone.

DIAGNOSIS.

Appendicitis with probable retrocaecal adhesions involving ureter; possible stone in the ureter.

Operation March 26th, 1913. A catheter was placed in right ureter by Dr. Bronner and left in situ during the operation. The abdomen was opened by incision in the right rectus muscle. Coils of intestine about the lower right abdomen showed a low grade peritonitis. The appendix was long with ample meso-appendix and showed marked congestion and adhesions. Interesting pathology was

noted about ureter in the pelvis, at the pelvic brim, and for two or three inches above the pelvic brim; at this area adhesions with inflammatory infiltration extended between the posterior wall of the parietal peritoneum to the ureter. This inflammatory infiltration possibly produced some obstruction, in any event caused the ureteritis which was largely responsible for the urinary findings. Palpation of the kidney and the entire ureter with its contained catheter confirmed the negative finding of the X-ray regarding stone. Appendix was removed, adhesions separated, raw surfaces were apposed. Abdomen was closed with catgut without drain. Blood, pus and the albumin disappeared from the urine within six or eight days and a good recovery was made.

Case II.

RUPTURED TUBAL PREGNANCY.

Mrs. J. H., age 27, married, one child two years of age. Patient menstruated regularly since the birth of her child, the last menstruation being on May 10th. I saw her on the morning of May 23rd with the history that she had felt entirely well until the previous evening, May 22nd, at which time she experienced severe abdominal pain. This persisted and an hour or two later her physician, Dr. Neff, was called and administered an opiate. She experienced only partial relief from this, suffering throughout most of the night and again called Dr. Neff at 5 o'clock on the morning of the 23rd. At that time she was in a profound collapse and I saw her later with Drs. Neff and Grasser. She was at once removed to the infirmary. The condition presented was as follows: pallor was quite marked, mucous membranes showing no evidence of color, pupils were dilated, respiration 17 to the minute and very feeble. Pulse could not be counted and the blood pressure taken at the brachial was about 50. Hemoglobin was 60, red cells slightly less than 3,000,000. Abdomen was distended and fluctuation plainly evident on palpation. Vaginal examination showed an exquisitely sensitive pelvis but was unable to detect a mass on either side of the uterus.

Diagnosis ruptured extra-uterine pregnancy.

Operation May 23rd, 1914. As soon as the patient arrived at the infirmary blood transfusion was begun, the husband acting as donor. Anastomosis was made between left radial artery of the husband and the left median cephalic vein on the patient. After transfusion had been in progress for sixteen minutes the patient's pulse could be counted, being 150, respiration 19, blood pressure 88. Under gas anaesthesia the abdomen was hurriedly opened and bleeding tube ligated and

*Read before the Jefferson County Medical Society.

removed. Only such blood as ran out through the incision, and this was quite a quantity, was removed. No effort was made to mop out the remainder, believing that this could be of service to the patient if it could be retained. As soon as the abdomen was closed transfusion was terminated, it having been in progress for twenty-three minutes. During this time the patient's pulse had come down, from one that could not be counted, to 134, respiration 28, and blood pressure, which at the beginning of the transfusion was even below 50, was at its completion 110. The blood pressure of the donor when the transfusion was started was 140; this gradually decreased during twenty-three minutes to 85, and blood count made on the husband within one hour showed hemoglobin 90 per cent, red cells 4,050,000. Patient was placed in bed and given continuous administration of saline by rectum. Recovery has been uneventful and complete.

Case III.

INTESTINAL OBSTRUCTION DUE TO GALLSTONE.

Mrs. J. H., age 59, father dead, tuberculosis; mother dead, 69, cause unknown. One brother dead, chronic hip-joint disease. One sister living. Married, five children.

No history of acute illness until last December, at which time she suffered with severe cramps in abdomen associated with nausea and vomiting for one week. Following this, while patient was able to be up and about, she complained of disturbance of digestion, especially of gas formation and a sensation of fullness in upper abdomen. The latter part of January a second attack was noted and she again confined to bed, this time for three weeks, during which time she had fever, elevation of pulse, distended abdomen. Considerable difficulty was experienced in keeping the bowel open. She was again able to be up and in a way to attend to her work until the first week of May. This time she again experienced difficulty with gas formation and marked constipation. At the end of the first week in May she was again forced to go to bed presenting the same symptoms, that is, nausea, vomiting, cramps and colic in the abdomen. She has been in bed continuously since the onset of this attack and vomiting has been present throughout, constipation being overcome by purgatives with increasing difficulty until complete obstruction supervened. During the time the pain lasted, that is, during the paroxysm, a palpable mass was noticed in the abdomen; this was oblong in shape and extended from right side toward the left side. At the time I saw her, obstruction had been complete for three days, patient having a temperature of 102, pulse 130, blood pressure 144, hemoglobin 90, white cells 8,-

900. Urine showed a specific gravity of 1010, trace of albumin, few blood cells, many pus cells, many bacilli, a few hyalin and granular casts and calcium oxalate crystals.

EXAMINATION.

Abdomen was tightly distended and at irregular intervals peristaltic waves, accompanied by severe pain, were plainly observed through the thin abdominal wall. Patient stated that she had lost over fifty pounds in weight since the first of January. Was unable to palpate any mass within the abdomen although the point of greatest tenderness seemed to be in the left hypogastric region. Vomiting always followed the ingestion of fluid and at times occurred spontaneously. Vomited material was characteristic of the upper intestinal contents. The colon was injected with bismuth and skiagraph failed to show any abnormal findings, being normal in its size and position.

DIAGNOSIS.

Intestinal obstruction, unknown cause. Immediate operation.

Operation May 24th, 1914. Incision below umbilicus showing markedly distended coils of gut with collapsed colon and adjacent ileum. Within the left side of abdomen a coil of gut was found presenting a hard nodule; this was withdrawn through the incision and the intestine found to contain a gallstone, same being about one inch in diameter and two inches in length, wedged tightly and producing complete obstruction. The portion of intestine involved was the ileum, about three or four feet from the ileo-cecal valve. Clamps were placed both above and below the stone, the latter being removed through incision in the wall of intestine. A rubber tube was placed in this incision and snug purse-string suture. The upper clamp was then removed and the fluid in the distended coil was pressed out through this tube, about two quarts being removed. Wound in intestine was sutured and abdomen closed without drainage. Convalescence complicated by bilateral suppurative paratinitis, requiring incision and evacuation. Recovery complete.

Vaccine Treatment of Pertussis.—P. Luttinger presents a tentative report on the curative and prophylactic value of this treatment. Pertussis stock vaccines as prepared by the Bureau of Laboratories of the Department of Health of New York City seem to have a prophylactic value when given in high doses. These vaccines seem to have shortened the duration and severity of the paroxysmal stage; the average duration of the whoop being twenty-five days, compared to forty days of those treated with drugs. Medical Record, June 5, 1915.

PERTUSSIS VACCINE AS A PROPHYLAXIS.—REPORT ON ITS USE AS SUCH.*

By S. C. FRANKEL, Louisville.

As an infectious disease of importance, pertussis may be classed with diphtheria and scarlet fever. It is probably the cause of more deaths to-day than is any other infectious disease. It does not kill directly through the means of a specific poison as do diphtheria and scarlet fever, but on account of its prolonged course and its many complications is equally effective as a life destroyer.

The bacillus described by Bordet and Gengou in 1906 is at present generally accepted as the probable cause of pertussis. The bacillus is present in the sputum in enormous numbers, and almost in pure cultures on the first two or three days after the onset of the whoop, and it may be found several days before the spasmodic stage begins—at the end of the first week of this stage, however, other bacteria such as pneumococci or staphylococci have usually become so numerous that isolation of the bacillus is impossible. Transmission, as with most of the communicable diseases, is by means of direct contact. That pertussis may be conveyed through the medium of clothing, a toy, or a second person is exceedingly doubtful.

Extreme youth offers no protection, children between the first and second dentition are most liable to be attacked. As a rule one attack protects; second attacks are excessively rare.

Heretofore, when pertussis broke out in an institution for children, prevention of an epidemic was practically impossible. Knowing this I was greatly perturbed when pertussis made its appearance in two babies in an institution, which was under my medical supervision. The babies who contracted pertussis were both under two years of age.

The institution was a receiving home for small children whose mothers were compelled to go to a hospital, and who remained at the home only during the illness of their mother. Most of the children brought to the institution during the presence of pertussis were babies who had never been exposed to the disease. My method of procedure was as follows:

Three babies, ages 15, 22 and 24 months who were in the institution when pertussis made its appearance, were injected with pertussis vaccine every fifth day for four injections, the first dose being 50 million dead bacteria, the three subsequent doses being 100 million. The remaining children in the institution, some 20 in number had all had pertussis, so none were injected with the vaccine.

New children before admittance to the institution were questioned in regard to their having had pertussis. Those who had never had the disease, were injected with 50 million killed bacteria immediately on their arrival at the institution and subsequent injections of 100 million followed from five to seven days thereafter. Seven babies were injected in this way, their ages ranging from 12 months to three years, making a total of ten babies to receive the prophylactic treatment. The reaction, temperature, dosage etc., is shown on the accompanying fever charts. No ill effect was produced in any child, the highest temperature charted being 100.4-5. No attempt at isolation was tried, as it would not have been proper to confine babies during the hot days of June and July, when they had the disease. Of the ten babies who received the prophylactic treatment none had developed pertussis as late as four months after their exposure, although they were in constant contact with the pertussis cases.

Conclusions drawn from my own experience with the use of pertussis vaccine as a prophylaxis are as follows:

Personal experience in a limited number of cases (10), results have been all that could be hoped for.

In no case occurring in this series were there any unpleasant symptoms resulting from the prophylactic treatment, nor have I heard of any.

Experience seem to prove that the best results are attained when 50 million dead bacteria are injected the first dose and 100 million for the subsequent doses, the interval between doses being five days. Park, Davis & Co.'s Pertussis Vaccine was used in this series of cases.

Prophylactic treatment should be begun immediately after exposure no matter how young the individual.

If a sufficiently large enough dose is administered immediately after exposure, a great majority of cases will be prevented and if the child should develop pertussis after the prophylactic treatment the case will be of a much milder type.

Sugar as a Hand Cleanser.—Dr. D. H. Stewart says: "The most careful antiseptic toilet may be brought to naught by the preliminary use of soap; therefore clean your hands with granulated sugar, and also dress wounds with it if you have nothing better." His experience since 1895 has shown that "with sugar and water, the physician's hands may be rendered sterile." This has been confirmed by laboratory tests. "Granulated sugar is gritty, takes the place of both soap and brush, does the work better and leaves the skin unscratched, soft and smooth."—Massachusetts Medical Journal.

*Read before the Jefferson County Medical Society.

SOME PRACTICAL CONSIDERATIONS,
IN REGARD TO EUGENICS.*

By CURRAN POPE, Louisville.

If, as applied to many other things in this life it is true that "*Everybody is doing it*," it would seem applicable to this subject in so far as "*Everybody*" is talking about Eugenics. In many instances those who are talking the most and the loudest, often seem to know the least, and those who say the least seem to realize and appreciate the wide field and the many complications that surround a many-sided subject such as eugenics. It has seemed to the writer that some of the medical profession have entered the eugenic field with the view of seeking the limelight of publicity and for the purpose of producing a practical increment from the financial side in their private practice.

Science, and incidentally everything else, has to bear the millstone of ignorance and graft, but there is less excuse for a physician along these lines, for the plain and simple reason that he *should* know better. Nothing is more distasteful to me than the faddist and grafter in science who utilizes noble scientific work for personal and private aggrandizement.

In the somewhat desultory remarks that follow, and particularly in the legal attitudes described, it should be distinctly understood that while we are "*Burbanking*" the members of the human race, it should also be borne in mind that proper laws should be passed as to the activities of Master Dan Cupid. Especially with a view to the fact that Master Dan should be restrained from wounding the cardiac apparatus of any one save those who stand fully accredited with the eugenic card.

What is meant by the word eugenics? Plainly and simply "good breeding." The science of eugenics then should consist in the complementary mating of two individuals of such types that their progeny shall be a "good breed." Applied or practical eugenics may be defined as the regulation of reproduction in accordance with the law of heredity with the aim of evolving a better or superior race.

If properly viewed from the unemotional and cold blooded scientific standpoint much can doubtless be accomplished, but a good deal of what is said and done at the present time may be described tersely as hysterical enthusiasm based on ignorance. It is an unfortunate modern condition that many of the best individuals of the race do not mate. Individuals who are superior by nature, often so ardently pursue their special avocation,

that they fail to take opportunity for the welding of the marriage bond.

Eugenics is not a special medical subject, but the physician should be especially interested in its relation to the social fabric because he is brought constantly to the realization of the laws of heredity, and he has rare opportunity in his practical daily life to study this important subject. The physician should remember that his enthusiasm should not carry him away, but that this subject should be given patient study and judicious deliberation. Otherwise his opinion will be of no value. The sublime purpose of the enthusiast to immediately correct grave social errors may be laudible, but it does not in any sense of the word warrant the rash measures they are attempting with the inevitable disappointment and failure to bring results.

Upon what is the science of eugenics based? This is easy to answer and it is most satisfactory to hear the chorus exclaim in perfect harmony "*the laws of heredity*." While it is a matter of common everyday observation that visible bodily characteristics and mental traits may be hereditary to a striking degree, it cannot be truthfully said that we know the laws of heredity, but rather that we are at present, and have been gathering facts and data upon which it is to be hoped laws can be formulated. In truth, we are merely beginning to grasp some of the fundamental facts in heredity, and of this I shall have something later to say.

It is almost laughable to hear and read the fallacies that are gravely and reverently handed from hand to mouth by the unthinking. It is generally supposed that the child is the child of its parents alone, and that he is endowed with the qualities and characteristics they possess. This is true in a way, but he is also a child of a past and heterogeneous group of forbears on both sides and that in addition to this he inherits phylogenetically, that is to say, inherits the ancestry of the entire race back to the time of the first faint traces of life upon this globe. If we are to believe that we inherit according to the laws of Mendel, it must be remembered that this is not an inheritance, *en masse*, but a unit inheritance, that is to say, an inheritance of color, of eye color, of lip, as in the Hapsburgs, etc., and it must be not forgotten that feeble-mindedness even is a recessive unit, that it does not as a rule appear in the first generation, and that as a rule the inheritor of this recessive characteristic, if he in turn marries a normal, no feeble-mindedness follows. On the contrary, in Huntingdons' Chorea, we have a dominant unit and all may be choreic. And then it were wise to remember that alcohol produces influences that have not been inherited but that may be transmitted. Are

*Read before the Jefferson County Medical Society.

we therefore as eugenists to exclude all users of alcohol?

The public, that dear and often times deluded body, is terribly shocked from time to time as reports are published of the number of individuals who through disease, delinquency, or congenital defect have become charges on the commonwealth, and so great is the shock that dissociation takes place and followed by a conversion hysteria occurs, which then proceeds to try and "law it out." It is a beautiful and human example of the myth of the ostrich with its head in the sand.

There is perhaps no more sacred, intimate or satisfactory state than that of marriage where the contracting parties really love one another, possess good health, and are truly and thoroughly companionable. Married life and the home are indissolubly bound together and around it cluster all the best and highest attributes, all of those better ideals which frail humanity possesses. Its essential and legal status is absolutely necessary to the warp and woof of the social fabric, an institution that has been duly appropriated by and taken possession of by religion. It is the foundation stone, not alone of religion and morality, but of patriotism and the economics of everyday life. In view of the well known adage *de gustibus non disputandum*, the individual in the selection of his or her mate should be permitted the exercise of the fullest freedom consonant with individual liberty and this liberty should in no sense of the word be restricted unless it can be shown that the restriction is of benefit to the individual directly, and is a necessity to prevent increasing burdens upon the state. From time immemorial, man has cherished the right to select his mate as one of the prerogatives of his civilized life, for it not alone carries with it all the higher ethical attributes mentioned above, but it is the normal and natural channel for the satisfaction and gratification of those passions associated with the generative instinct, and which in their results are an essential element in the foundation of the state itself and our present social fabric. Anything that interferes seriously with a decline in the marriage rate or in the birth rate itself, would require not only thoughtful and scientific study, but should be interfered with by *legal dictum* or fallacious meddling, only in extremis.

Marriage presupposes a common interest and affection and devotion given by both parties, because each party is able to receive and respond, and where this high ethical position is taken, the family is founded under the best of circumstances. But when, as is so often times the case, the marriage results in a pair from whom the population is recruited by *accident*, then it should be remembered

that there is no possible way of reaching such a condition by any one or several methods of legal or state control.

The eugenic enthusiasm wants "*results*," immediate results, and this is entirely out of the question. The scientific study of eugenics and human heredity can only be proved in generations, and these are measured by *double decades*. But to the scientific reformer, the thoughtful student and the cold logician, the *real* facts must first be sought upon which to base regulation, expecting nothing *in presente* but hoping for results *in futuro*. As we cannot see immediate results, we must indeed be very cautious and very careful as to how we proceed with our work, for we must view this subject from its many faceted position.

The rabid enthusiast proclaiming the foundation of his eugenics upon the laws of heredity, must remember, in so far as they apply to humans, and in so far as they have been verified in their application to human beings, there are few laws indeed. The plain truth of the business is that we need at all times patient study and judicial deliberation. The actual diseases positively known to be hereditary are few, and this seriously complicates the problem. If we except the congenital defective, I do not believe that any student can maintain the thesis that epilepsy, alcoholics, criminality, prostitution, etc., are actually the result of transmitted weaknesses and might not be the result of accident, disease, defects of training, or the results of unfavorable environment. How many stop to reflect that the alcoholic often times drinks because of some condition other than an hereditary trait? How many stop to investigate the psychological foundations of alcoholic abuses?

It would seem from a careful sifting of the evidence pro and con, that those who believe that acquired characteristics can not be transmitted, seem to have the best side of the argument. And to those eugenic reformers who are so anxious to restrict and regulate, would it not be a wise thing to sit down and remember that while they are in the sere and yellow leaf of passion's grasp, still there was a time when their own blood ran red and rioted in the exuberance of youth and love and hope and happiness. Let them look back to youth from their "Lean and slippered pantaloons stage," ask themselves if even in their aging years they themselves feel a submission to constituted authority and would they as youths regarded such control. I do not think this is in any sense of the word a conspicuous attribute of the temperamental reformer and when it comes to youth, who shall say that he shall not love, and hope and be happy, that he shall not riot in exotic love but must submissively bow to the letter of authority. One

should remember these things and gently but kindly try and lead, not drive the tender loves of youth, save where from fairly good knowledge disaster looms surely ahead.

So many seem blinded to the fact that social improvement does not by any means, twist the facts as you will, mean racial improvement. It may be in the long run a beneficial factor, but it certainly is not worthy of the very high position given it as a racial factor. When it comes to the legislative and legal side of the question, science is apt to be sorely and terribly shaken up. The value of a law on the statute book, in my humble opinion, resolves itself into a question of enforcement, and we have, alas to our sorrow, found that the enforcement of laws does not seem to be influenced largely by the attitude toward the laws themselves, for our criminal courts are overrun, and our judges worked to death by a docket filled to overflowing with petit and grand larceny, assault and battery, mayhem, rape, homicide and murder.

Who makes these laws, and who are their advisors? There are, no doubt, many estimable and honorable citizens occupying seats in the legislative halls of this country, and they are doubtless anxious to serve their constituency to the best of their ability provided it does not in any way interfere with their own personal aims and needs. But are they competent to judge of the value of a eugenic law? In my most humble opinion, no, and their advisors are not likely to be men whose opinion should be sought, but are more frequently a heterogenous group of men and women who are carried away by an emotional enthusiasm under the delusionary belief that by means of a law, principally checking vice and restricting marriage, they can accomplish those things that it will take generations upon generations to bring about. The position of the legislators recalls to my mind a humorous story told by the late lamented John T. Raymond. "One Biggs, a wealthy individual of shy and retiring disposition, but possessed of a considerable "barrel" of this world's goods, is sought by a grafting politician as a candidate for Congress, largely on the basis of the possession of the aforesaid barrel. After listening to the eloquent plea to become a candidate and incidentally to let the politician handle the campaign funds, Biggs says that a man to be in Congress should know history, politics, religion, medicine, political economy, finances and many other items equally important, and for that reason he cannot run. But the politician shakes his head negatively as Biggs continues his argument. He says that never on earth would it do for a man to be sent to Congress knowing as much as that man was supposed to know according to Biggs' idea. When asked by Biggs as to why

it would never do to send such a learned man to Congress the politician replied 'He would be too damn lonely.' " The application of this witty story I will leave to those abler minds whom I am addressing this evening. The truth of the business is that the making of eugenic laws is frequently a tinkering with science.

"The immediate and remote results of the proposed radical change should be calculated for the purpose of learning how far they agree or conflict with established usage, for the practices so designated not infrequently meet all situations likely to arise much better than they might be expected to do from a superficial examination of them. Indeed thorough analysis often shows that with only slight modification, or none at all, forms of conduct fixed by custom are those best suited to the needs of the community in which they prevail.

The truth of the business is that a good many of the laws passed are based on sentimental bosh. "It never seems to have occurred to the particular kind of idiot who framed the Wisconsin Eugenic law, and thereby discredited the science of eugenics in the popular mind, that if you made the marriage ceremony difficult or otherwise disagreeable to the people at large that men and women would nevertheless continue to come together, live together, and have children in orderly and respectable families notwithstanding the forms of the law. Such state of affairs was seen in Cuba before American investigation, when the cost of the necessary civil and religious ceremony made marriage a luxury to the poorer classes of the island."

The law above referred to was sustained by the Supreme Court by a majority in spite of the fact that the statute was assailed as being unconstitutional, interfering with the rights of individual citizens, etc. The court finally compromised on the interpretation to the effect that the state *had* the right to regulate the marriage relation, but divided on the question as to the wisdom of the statute, to the practicability of its enforcement and ended by saying that it believed that the legislature only contemplated such an ordinary examination as was customary by the family physician or the general practitioner of medicine for the discovery of venereal diseases, which in this day and generation practically means no eugenic examination at all.

It is always customary under such circumstances and eminently proper, too, to consider the question of constitutional freedom and personal liberty, which is granted to us under the constitution of our state and country. Any new law which requires a radical change in an especial custom or practice cannot usually be enforced unless those whom it is intended to benefit are able to comprehend and

appreciate its advantages, and as very few individuals are able to do this at the present time, most of these laws are unpopular and resented.

And, further, it has been argued that the right to procreate and propagate the species is an inherent one, identical with life itself, and that to abrogate this right is to do violence to a God-given natural right, which no constitution, government or law may rightly and safely take away; and that while the law may provide for the taking of life for life in defense of community life, no law can rightfully be enacted to curtail the rights of the individual to reproduce, except perhaps as a punishment for statutory rape.

The constitutionality as well as the futility of such legislation is brought into question by the assertion that "such measures to be valid must provide a right of appeal, and that a trial by jury must be accorded." The latter, it is asserted, would be almost impossible, "as the man in the street is not influenced to any extent by the higher-plane ideal, since, usually he is swayed by the facts of life and is withal distrustful of disinterested fervor."

John Stuart Mill has said that " * * * the sole end for which mankind are warranted individually or collectively in interfering with the liberty of action of any of their numbers is self-protection. The only purpose for which power can be rightfully exercised among members of a civilized community against his will is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant. He cannot rightfully be compelled to do or forbear because it will be better for him to do so; because it will make him any happier; because in the opinions of others to do so would be wise or even right.

* * * In the part which merely concerns the individual, his independence is of right absolute. Over himself, over his own body and mind, the individual is sovereign.

* * * Secondly, the principle requires liberty of tastes and pursuits, or framing the plan of our life to suit our own character; of doing as we like subject to such consequences as may follow without impediment from our fellow creatures, so long as what we do does not harm them even though they should think our conduct foolish, perverse, or wrong. The acts of an individual may be hurtful to others or wanting in due consideration of their welfare without going the length of violating any of their constituted rights. The offender may then be justly punished by opinion though not by law. * * *

But there is no room for discussion when a person's conduct affects the interests of no person beside himself or need not affect them unless they like, all the persons concerned being of full age, and the ordinary amount of

understanding. In all such cases there should be perfect freedom, legal and social, to do the act and stand the consequences.

But it has been held by the Supreme courts that the individual must surrender certain of his prerogatives for the general good. But at the present time, it is a pertinent question to ask: is our knowledge definite enough to ask the individual as yet to surrender his rights? This question has been admirably stated by Justice Carter that "The police power of a state is that inherent plenary power which permits it to prohibit all things hurtful to the comfort, welfare and safety of society." Fancy eugenics in the hands of the police.

It must not be forgotten that in the restriction of marriage and with the difficulties that have been placed upon it by hasty laws, that there are many sides to the question save that of heredity: notably the sex question and the danger of neurosis and psychosis in the male as the result of celibacy, repression, and the inadequacy of sexual life. In truth the child should be prepared for a eugenic marriage by having properly imparted to him the various aspects of sexuality and inheritance and that this should come through the teachings of parents and guardian, and in a restricted sense through educational measures. It is a broad question full of fruitful thought and consideration.

How would the eugenic enthusiast restrict? There are a number of ways. It has been suggested that the individual should be sterilized according to the method first suggested by Dr. Sharp; namely, the ligation of the vas deferens which permits of sterility without impotency, and there is no question but what in a restricted class of individuals that this might be followed with benefit; in fact, the great difficulty lies in deciding who should or should not be sterilized. There must always remain under any circumstances a suitable number of individuals in reference to whose proper classification more or less doubt would exist. Hence, if the element of uncertainty inherent in the situation, were left for unprincipled members of the medical profession, prompted by cupidity, to pronounce anyone unfit who might apply to them for a sterilizing operation were dangerous indeed. It must not be forgotten that there are many women who regard child bearing as a burden put upon them without due regard to the dispensation of justice, and cannot these make a false pretense of their unfitness, in order to secure safety through the advantage of sterility? And will you answer the question I am now propounding, by what standard and by what proof will there be of deterioration by which we can measure the question as to whether the person is or is not entitled to sterilization.

Through all of this it has been presumed that there is a pre-nuptial attitude of both parents. These parents according to the eugenic view, have as their sole object the interest of the child, and presume that the woman is anxious for maternity, but, if I mistake not, it will take more than legislation and some generations in these piping times of commercial attitudes to change woman's outlook upon maternity, especially the high bred and eugenically inclined individual, and that unless this mental state is changed, eugenics becomes a farce.

It has heretofore been both unjustly, unfairly and illogically considered only necessary to examine the male contemplating entering into the eugenic state of matrimony. This is entirely beside the question. The truth of the business is that if we are to eugenically examine, what is sauce for the gander should be the same kind of condiment for the goose, and it might not be a bad plan to at the same time examine the examiner, and see if he or she is by disposition and capacity capable of making the examination and of such high moral and ethical quality as to be able to rule aside that sublime passion, cupidity. Let us give both a square deal, and as the howl is greatest against those who come as charges upon the commonwealth in the shape of the mentally afflicted, why should we not inquire into the mental state as well.

It were well to remember, however, that those who are prone to jump to the conclusions are frequently those who are least in a position to judiciously consider what they find upon examination. How many men would we find to be capable of examining eugenically for the finding of psychiatric states or mental complexes? Do we inherit these? How many know anything of the psychopathology of every day life, of the psychopathology of the so-called "healthy family," of those psychic states that often times lead directly to crime, and indirectly to many other violations of the moral code, and yet are no more inherited than traits are inherited from her lunar majesty.

What hope have you at the present time, when I tell you that I know of a highly educated couple; the man and woman graduates of a university. Upon one side of the house insanity runs with such strength and force as to drive the fact into and through the thickest skull imaginable, and on the other side, a tubercular family, that generation after generation have been unable to withstand the onslaughts of this germ. Think of it! Insanity wedding tuberculosis in a social stratum, and in people who cannot under any circumstances plead ignorance. Does it not make one feel just a little uncertain of the value of eugenic law-making?

It has been proposed to inact into a law, that the male shall come as a contracting partner, free from the taint of venereal diseases, and without those supposedly hereditary diseases that would prove a bar as a contracting party. So far, so good. The female should be likewise subjected to a like examination, and both to such physical examination as would be demanded for reasonable health. But it has not always been an "unfortunate woman" proposition. Not always a woman upon whom has been forced a brutal, debased and diseased husband. God knows this has often times been true, but we must remember that all seemingly moral women are not moral and all is not innocence that plays the role, and nature has often played a part that should preclude the female partner in a eugenic marriage. What shall we say of those women who suffer from an infantile uterus, and who are thus precluded from the joys of motherhood? What shall we say of her whom nature has most unfortunately robbed of breast and nipple suitable for the suckling of her young? What shall we do with these propositions?

No one has higher respect for sentiment than I, and I believe in the value of sentiment as a voting force in life and morals, but we are now not considering sentiment, but eugenics, and while sentiment is proper in its place, if we are to have a eugenic examination, then sentiment must give way to practical necessity. This is now being recognized by at least one country in the world, and to-day Switzerland in a rather sensible manner has decided that brides as well as bridegrooms must "prove up" their statement of health by medical authority before approaching the altar. I cannot in any sense of the word see that in matrimony, as in other relations every individual should not be entitled to a square deal. If the bride is entitled to a mate of certified eligibility, then the bridegroom has the right to demand the same thing of her. If the unborn child is entitled to a healthy father, it is equally entitled to a healthy mother, and if either is unsuitable it does not help the child in any sense of the word.

Personally, I am inclined to believe that if an investigation is to be made, that it must be made in that spirit in keeping with the demands of race hygiene, and not performed with the disposition of a Mrs. Grundy. If people could be educated to look at an eugenic examination in the same light as that for the army or navy, for the police, for life insurance, there would be an enormous step toward a sensible view of eugenics. It may truly be said that so long as one or the other side is singled out, the entire proposition will be a failure, for I repeat that a woman with a contracted pelvis, with lack of vital power, with

an infantile womb; none of these through her own fault, may be, is useless as a partner in a eugenic marriage.

After all, I think it may be truly said that nothing will be accomplished through legal process at the present time, that whatever legal steps are taken, must be upon broad principles for future generations. And that the present stronghold for the fight must be along lines of education. In fact, I feel satisfied that education, using the term in the broadest possible sense, constitutes the main, if not indeed, the sole resource upon which reliance must be placed for progress toward the desired end. But remember that where this is done, the reformer and the enthusiast, the unmarried and the hysterical will gain nothing; the reformer getting no glory, and being left to die of innocuous desuetude.

Woman is coming into her own, and the signs of the times would seem to point indisputably toward the fact that she not alone seeks freedom at the polls, but also that sexual freedom that has heretofore ever been the prerogative of man. Nor must we forget that the practice of celibacy is not without its penalties, no matter how strong may be the will, how vigorous the bodily exercise, or the spiritual endeavor to subject the strongest of sex desires. That the ability to do so is lessening rather than increasing is constantly shown by the lessening of the power and control of religion. For sad as it may be and as pitiful as it is to notice, there is a tendency on the part of religion to be perfunctory, to have lost a good deal of its control of the genic instinct. And the direction of the people into sensible eugenic channels, lies largely with the educational powers, and with the influence that religion exerts upon the life of the individual.

Since the tendency to shirk motherhood is principally among educated women of the better classes, when we speak of education in the broadest sense, we mean not only education in general, but education along special lines with motherhood in view, and thus we see that we are beginning to spread out tentacles in every direction and that this subject touches intimately the life of the social fabric from every possible and conceivable angle.

How shall we teach? The mother must teach the child, male or female, the broad principles that underlie the betterment of the race. The church, the Christian principles that demand parentage and the state by careful education of young people in the knowledge of those processes and their sacredness that lead to the greatest and grandest functions; that of parenthood.

Suppose the eugenicist were successful, and that they did breed this "*noble race*" with perfection of form, with grace of Apollo,

with the intellect of Jove! What would become of the cooks, and you must realize that Meredith has said that "civilized man cannot live without cooks," hence according to Meredith, the race would die. But doubtless by the time this Utopia had been reached, we would need no hewer of wood, no drawer of water, no fryer of food, but would be able to take our eugenic food and drink in capsules, made by the intellectual highbrow of the "noble race." But we must not forget that this is Utopia, and the chances are we cannot undo nature's laws, and that we cannot make even all men born equal before the law, much less equal in fact. We must never forget that nature ever tends to bring up from below, and pull down from above the nature of superman, until their progeny reached the level of the normal middle liner.

From some of the caustic remarks indulged herein, it might not be unfair to ask the writer how should one proceed in a sensible endeavor to better the race and make them reach that level which Maudsley, that most literary and philosophical of Psychiatrists, term "The best physical with the highest sanity." I would respectfully submit the following propositions: (1) Testing of young school children, so as to discover plain and larvated cases of feeble-mindedness, insanity and epilepsy, who should then be segregated, placed under state control and care, and made nearly as possible self sustaining.

(2). Tutor the normal child at home and at school in the rudiments of sex in plant and animal life, instilling intense respect for parentage.

(3). Positively forbid marriage to the known insane, criminal, feeble minded, tubercular, and with known inherited diseases, such as will make for the danger of state care.

(4). Avoid venereal diseases by a sensible recognition of the fact that clinical control and prompt treatment will do more than "Lawing them out." For this always increases and hides venereal diseases.

(5). Remember that each child born into the world phylogenetically represents the race from its development to the present time and that within each child lie all the primal and savage passions and instincts.

(6). Not forgetting that the veneer of civilization to the so-called code is very thin, and breaks at the touch of man and maid.

(7). Do not think that a few laws, a few rabid enthusiasts, a legal piece of machinery can unmake a man and a maid, who have been aeons and aeons in the making.

(8). Realize that progress of this kind moves in decades.

(9). Remember that nature, passions and instincts, love, hate and "All that in them is" is arranged on the other side.

(10). Remember that all tenderness of modern life, economics, etc., are tending to *prevent* marriage; to hinder the rearing of a family, and that laws that further limit may do inestimable damage to the social fabric.

(11). Remember that prostitution is common within the marriage bond as well as out; and that many men and women are neurotic, neurasthenoid, hysterical and afflicted with bodily diseases due to improper sexual living.

(12). That all cannot be of a "*noble race*"; physical Venus', Dianas and Apollos, even though eugenically conceived, as there are such things as accidents during child-birth, infancy, and even in adult life.

(13). That law making must be based on scientific heredity; that human heredity is little known and that law makers and solons, lack that wisdom and knowledge of the ages, to mold proper laws without scientific data.

(14). That the laws should limit only where there is well recognized risk to the state. It were better to enact laws to remove from the creative pasture such persons as criminals, feeble minded, epileptic and insane sterilizing, segregating and making every endeavor to make them helpful and self supporting by making shoes, mops, brooms, etc., for the eleemosynary institutions of state and city. This law would probably have a hard time surviving, as it might eliminate some graft.

(15). That intelligent physicians try to stem the tide of foolish hysterical enthusiasts in their endeavor to have enacted foolish laws, until such time that we have cold scientific knowledge to guide us.

(16). That the personal liberty of the individual be restricted as little as possible.

(17). That females be put on the same basis as males, if we are to examine.

(18). That those who believe in legislation enforced for the uplifting of the human race should remember that inherent vice cannot be conformed into innate virtue, nor can they change leaden instincts into golden conduct, nor transform a sow's ear into a silk purse by any amount of social progress or legislative acts.

(19). That a few sensible rules at the present time should guide a sensible man and woman in matrimony. We would respectfully suggest that in the business of marrying that it be put on this practical matter-of-fact footing. That when a man and a maid marry they should both be willing to abide by the following: Both of their families should have a reasonable longevity; that they both be free from known hereditary diseases; that neither marry late in life, and if they are delicate, feeble or afflicted with deformity; that neither should marry if they are of an extremely nervous temperament, extremely irritable,

hysterical, subject to convulsions or epilepsy; and that no man or woman should marry before they are fully developed, which it has been estimated in this country to be for a man 24 to 25 years, and for a woman, 19 to 20 years.

This is not an extremely difficult platform, but it would certainly result in a decided betterment of the present marriage system while we were waiting for time, knowledge and science to point the way for a definite solution of these problems and well tried out and well established laws of both heredity and environment.

ACUTE DYSENTERY IN THE ADULT.*

By T. E. CRAIG, Colesburg.

Acute dysentery is a disease principally of the large bowel, with or without fever, characterized by diarrhoea which is often bloody in character, with tormina and tenesmus.

There are three types of dysentery, catarrhal, bacillary and amebic.

ETIOLOGY.

(1). Catarrhal, this type occurs more frequently as an accompaniment to and symptom of other diseases as typhoid, tuberculosis etc. It is also caused by the ingestion of irritants such as improper food, etc.

(2). Bacillary is due to infection with the bacillus dysenteriae of Shiga.

(3). Amebic is due to infection with the ameba coli.

PATHOLOGY.

Catarrhal. This varies with the severity. In the lighter forms there is merely an excessive secretion of mucus associated with desquamation of epithelial cells, exudation of more or less serum and emigration of a small number of leukocytes. The mucosa is swollen and congested. In severer forms the gut surface is covered with mucus and streaked with blood. The mucosa is much injected and bleeding points can be made out. The lymphoid nodules are enlarged and prominent. In many cases small defects in the epithelium of these nodules form small ulcers. There may be a purulent exudate and in some severe cases there is formation of connective tissue between the glands and the submucosa.

Bacillary. This varies with the form and the duration of the disease. In the typical form the lesions are pseudo-membranous, exudative and necrotic with more or less ulceration of the mucosa and submucosa. The membrane is grayish-white, presents a granular surface and appears first on the elevations of mucosa corresponding to the insertions of the

*Read before the Hardin County Medical Society.

bands of the longitudinal muscles and transverse lines of the colic pouches. As the condition progresses the intervening mucosa is covered with pseudo-membrane. The entire mucosa is injected, swollen and covered with blood-stained mucus, beneath which bleeding points can be discerned. The membrane consists of a fibrinous and cellular exudation which lies on the surface and penetrates to a variable extent into the mucosa. The glands of Lieberkuhn necrose and become invaded by membrane. A demarkation inflammation takes place between the living and necrotic tissue which exfoliates and leaves the typical acute dysenteric ulcer. The disease may end at this stage or an earlier one and the mucosa be restored or the necrosis may extend more deeply and involve the submucous and muscular coats. When connective tissue restores this loss of normal tissue scars and constrictions of the lumen of the gut may result. The inflammation may even penetrate to the peritoneal coat and cause peritoneal adhesions. Very rarely perforation results.

Amoebic. The characteristic lesion is ulceration involving the mucosa and submucosa. The amoeba excites a modern exudative and productive inflammation followed by necrosis which sloughs off and forms the ulcers. Connective tissue proliferation in favorable cases restores the defect at the site of the ulcer or severe changes may take place as in the bacillary. There is never a membrane except in cases complicated with bacillary.

DIAGNOSIS.

The main diseases confused with dysentery are (1) Simple diarrhoea; (2) Local affections of the rectum as cancer, syphilis and hemorrhoids; (3) Intussusception; (4) Typhoid fever.

1. In diarrhoea the absence of tenesmus and stools composed of mucus and blood are sufficient. 2. In cancers, syphilis and hemorrhoids the history and examination of the rectum will differentiate. 3. In intussusception there is persistent vomiting, the stools are bloody rather than mucoid, laxatives are not effectual, fever is not an early symptom, and examination of the abdomen will reveal a tumor. 4. In typhoid the Widal test is positive. The fever rises slower, the stools are rarely blood, the spleen is not enlarged and the rose rash is absent.

DIAGNOSIS OF VARIETIES.

Catarrhal. We have other diseases or a history of improper eating, etc. It runs a quick course compared with the other varieties and the symptoms are not as severe.

Bacillary. We can find the bacillus dysenteriae in the stools or an agglutination test can be made similar to the Widal by using the bacillus dysenteriae instead of the bacil-

lus typhosus. The symptoms are much severer than the catarrhal.

Amoebic. The amoeba coli can be found in the stools or the ulcers themselves can be touched with a swab and the amoeba recovered.

SYMPTOMS.

Catarrhal. This form is usually ushered in by diarrhoea, the first stools being copious and painless. These are soon replaced by small discharges streaked with blood and accompanied by cramping abdominal pains known as tormina and straining or tenesmus. The straining is very severe and causes frequent small stools yet the total quantity in 24 hours is not large, from 24 to 48 ounces being a full amount. Rarely a chill ushers in the attack. The tongue at first is furred and moist later it becomes dry. There may be some nausea and vomiting. There is usually more or less fever, rarely exceeding 103 F.

There is thirst and acceleration of pulse. The abdomen may be tender but not necessarily so. It may be swollen and soft or flat and hard. The average case is self-limiting and runs a course of about one week.

Bacillary. In this form the symptoms are the same as the catarrhal but intensified. The fever is higher, the pain is greater, the tormina and tenesmus more severe. The stools are bloodier and prostration is more profound. The tongue is dry and delirium may be found. The abdomen is tender and swollen.

Amoebic. In this the symptoms are the same as the catarrhal but more irregular and more prolonged. The onset is less sudden. The stools are less in number but more copious and liquid. The tenesmus is less. The disease runs an irregular course, sometimes being almost normal then much worse. The fever may be severe or mild. In some cases the abdominal symptoms may be absent altogether and simulate a hepatic or pulmonary abscess.

TREATMENT.

(A). Prophylaxis. This consists in general hygienic precautions. During the hot weather when these attacks are frequent we should impress upon our clientele the importance of selecting fresh and sound provisions. Care must be taken not to eat undercooked or indigestible substances. Especial attention must be paid to the water supply. Great care should be taken that there is no fecal contamination of the water. Especially must it be impressed upon people the necessity of not overloading their stomachs on hot days with iced drinks.

(B). Dietetic. Food should consist of substances which are bland and readily digestible, so that the main part of digestion oc-

curs in the stomach and upper part of the small gut. The food should be prepared to have as small a residue as possible so as not to irritate the lower bowel. Beef—peptonoids and beef-juice are among the best. Milk if given should be peptonized so as to digest readily and it is better to give it often and in small amounts. If given plain it may add fuel to the flame by passing through the stomach and upper bowel undigested and furnish fuel to the lower bowel for the invading organisms instead of the patient. Solid foods are contra-indicated but nourishing liquid or semi-solid food must be given sufficient to nourish the patient.

(C). Medicinal. The first indications are elimination and relief of pain. Elimination is accomplished in various ways. I prefer fractional doses of calomel followed by castor oil. Castor oil and laudanum can be used and where we are called to a case suffering severely we can eliminate and relieve pain at the same time by these. The following is the best method of administration. Take two ounces of orange juice, one ounce of castor oil and ten to twenty drops of laudanum. Mix the castor oil and laudanum and lay it on top of one ounce of orange juice in a glass then pour the other ounce or orange juice over it and have the patient drink without stopping. Elimination can also be accomplished by the saline method as described later. Relief of pain is best accomplished by some form of opium. In this condition we find a true indication for opium as it relieves pain and does not mask symptoms but on the other hand has a curative effect by checking peristalsis and checking the excessive secretion. As to a curative treatment for dysentery many have been used, all more or less efficient. I will try and outline the main points of the best ones of the lot.

One of the best recent articles on the curative treatment of dysentery is by Hobert, of India, where some of the severest types of all the forms are seen, and in much greater number than in America. He gives the results of hundreds of cases and says that in only two cases has magnesium sulphate, properly given, failed him. He gives one drachm every hour for three days then if the case is not materially improved by this time he stops all treatment for one day and gives nothing but chloranodyne as he has found that the trouble is due to a spasm of the colon and the chloranodyne will stop this. The next day he resumes the magnesium sulphate and has had only two failures in hundreds of cases and these improved under treatment. In these two cases a cure resulted following two or three doses of sixty grains of powdered ipecac preceded by thirty grains of chloral to put the stomach at rest so the ipecac would not be

vomited. The ipecac treatment has been used with great success in all forms and is claimed by Rogers to be a specific in the amoebic by the use of its alkaloid emetine. He gives one-half to one grain three times a day until a cure results. No nausea is experienced and the results are excellent. The ipecac can be given in several ways. The best method is as follows: Have the patient's stomach empty then have him lie down. Give 15 to 20 drops of laudanum, wait 20 minutes and give the desired dose of ipecac which is from 15 grains to dram 1, by mixing it to a paste with water and rolling into a pill. The patient must not take any liquid or food for four hours. A mustard plaster over the stomach often prevents nausea. Repeat the next day in smaller dose and so on till recovery takes place which occurs in a short time in acute cases. The ipecac first allays pain, then fever and finally the bloody discharges. Recovery is at hand when the stool is painless, semi-solid and copious and the color of powdered ipecac.

A recent method of giving ipecac without nausea is to soak 00 capsules in 20 per cent. formaldehyde for a few hours then dry and fill with ipecac. The formaldehyde renders the capsules insoluble and an acid medium and thereby avoids emesis.

The antiseptic treatment consists of the administration of Salol, the sulpho-carbolates, guaiacol and various other intestinal antiseptics. These act very well in ordinary cases but do not give the results of the former methods in severe cases. They are usually combined with astringents.

I will give a few prescriptions for the ordinary cases as we see them daily through the summer. *Sima-rubra officinalis* has been highly recommended when combined with laudanum. I use a solution of catechu and hydrastis in blackberry cordial with laudanum and find it efficient in the average case. Capsules of equal parts of salol bismuth subnitrate and opium is a good combination. Dr. Richmond advises the following: Take one powder every four hours composed of 20 grains of resublimed sulphur and 5 grains of Dover's powder. He claims that it quickly stops the blood and mucus and makes the discharges fecal. The sulphur is an antiseptic and brings about a speedy healing of the ulcerated surfaces. He claims 100 per cent. of cures.

Local Injections. Many drugs have been injected into the bowel for their local curative effect, some with very beneficial results. A 5 per cent solution of hydrogen peroxide in water injected slowly once a day has been very efficient after the acute stage has passed. A 1-1000 to 1-5000 solution of quinine has given fine results in the amoeboid. The in-

jection of coal oil as advocated by Dr. G. S. Hanes, of Louisville, has given good results.

Local applications are often of great benefit. An ice-bag will often relieve the abdominal pain by quieting peristalsis. Hot turpentine stupes act well in a similar way.

This, gentlemen, concludes my article. I do not claim originality in any but a small part of the paper.

TYPHOID FEVER.*

By J. V. STARK, Kirksey.

No other disease with the possible exception of tuberculosis is receiving so much attention in the medical world.

It is well that it should, because in the universal interest lies the hope of its final control.

Fortunately the germ is isolated and this defines lines along which we can work.

Typhoid fever is now considered a contagious disease similar to diphtheria and meningitis.

Modern sanitary science regards it as a filth disease and it is a reflection on the community where it exists.

In 1900 there were in the U. S. A. 35,379 deaths and according to Whipple's calculations, this represents a loss of \$212,000,000 for the year alone, reckoned on a monetary basis. Is it surprising that the medical profession is aroused?

Typhoid fever is due to a germ. The typhoid bacillus, so small that millions may be picked up on the point of a pin, or carried on the legs of a fly. The disease is caused by swallowing these germs. Anything that will carry the bowel discharges or urine from a person with typhoid fever to the mouth of another person may cause the disease.

The stage of incubation varies much in duration, and is generally considered but two or three weeks, though it is sometimes much shorter. The onset is, as a rule, slow and gradual.

First week, in a moderately severe case, the patient complains of a general feeling of weakness, headache, pains in the back of the neck, wakefulness, the skin hot and dry, and toward the last of the week, a few rose-colored spots appear, usually on the abdomen.

During the second week, the symptoms already described, are increased in severity. The patient loses strength from day to day. The headache usually disappears, and delirium supervenes.

Third week, patient's weakness and emaciation becomes intense, and muscular movements are made with difficulty. The pulse becomes rapid. The heart sounds, that is, the

first, may be scarcely audible. The temperature may begin to fall gradually.

The fourth week, as a general rule, convalescence becomes well established, and there is a gradual abatement of the symptoms.

PATHOLOGY.

The characteristic lesions are found in the abdominal lymphatics, (Peyer's patches) solitary and mesenteric glands. The changes in Peyer's glands are best studied in the lower part of the ileum. In a few days the glands are swollen and hyperemic, later, marked cell proliferation. The blood vessels are compressed, and the glands pale and prominent. As the disease progresses, the gland becomes yellow, soft and necrosed. Later the necrosed tissue loosens leaving a soft oval, ulcerated surface, with irregular edges.

In the fourth week, the gland is replaced by a smooth depressed scar. The mucous membrane of both the large and small bowel show catarrhal changes. In mild cases the stage of ulceration may not be reached, and the glands are absorbed. The spleen is soft and swollen. The liver, kidneys and heart show parenchymatous degeneration. The respiratory tract is commonly the seat of catarrhal inflammation, and in rare cases there appears to be a general infection without lesions of the intestinal glands, (typhoid septicemia).

DIAGNOSIS.

The general diagnostic characteristics are the gradual onset, slow rise of temperature with daily elevations, the compressible and dichrotic pulse, nose bleed, the tongue coated with a white fur, dense in the center and disappearing at the edges, dullness of the countenance, rose colored spots, enlargement of the spleen and absence of leukocytosis.

The diagnosis of typhoid has been found difficult on account of the slowness of the development of symptoms and the resemblance to those of other diseases. This difficulty has been largely removed by Widal's serum reaction.

The diazo reaction is still considered a valuable test. Examination of the blood may also be of value to the diagnosis.

Acute miliary tuberculosis, ulcerative endocarditis, enteritis meningitis and many other diseases may be mistaken for typhoid fever, but by careful study and certain tests may be eliminated.

TREATMENT.

I will not attempt to give a treatment for each and every thing that may occur, but will just touch the general treatment.

For the treatment of an attack of typhoid fever at any age, the therapy is to be purely expectant. Few of us have any faith now-

*Read before the Calloway County Medical Society.

adays in the value of efforts to disinfect the intestinal tract in the hope of preventing re-sorption of the germs. If you can not do good at least do no harm. Over-treatment is a wide-spread evil, and drugs are given to combat every individual symptom. This is wrong. Rest in bed is imperative in every case, no matter how mild. The diet should be light, digestable and sufficient.

The wasting and weakness after recovery are often the result of starvation. Milk is the food to be relied on, in most cases, but often more concentrated nourishment is required, such as egg albumen, cereal porridges of different sorts, except oat meal, if there is diarrhea, junket, milk, toast, rice pudding usually suffice.

There is a growing belief that the dietetic treatment of typhoid might be improved with advantage. The last year I adopted a plan used in some of our large hospitals, that is, the patient has an average of three pints of milk in twenty-four hours, divided into feeds of four or five ounces, every alternate hour. If the patient has much diarrhea it may be mixed with one-fourth lime water, and if it is not readily assimilated, it may be peptonized. This method is kept up the whole of the illness. No solid food allowed till the temperature has been normal for six or eight days.

Many cases of the vaunted cures from specific drugs are really dietetic. Water is given freely.

Don't eat or drink anything on infected premises. Don't drink milk or water from unknown sources. Wash the hands well before eating and above all screen the privy and swat the fly.

The present war is furnishing impressive testimonials as to the efficiency of anti-typhoid inoculation. During six months there were in the British army four hundred and twenty-one cases and thirty-five deaths from typhoid fever; of these cases three hundred and five were men who had not been vaccinated, of the thirty-five deaths, thirty-four were men who had not been vaccinated in two years.

Anti-typhoid inoculation was made compulsory in the United States army in 1911. Before 1911 the number of deaths among an average of seventy thousand men, was three hundred and fourteen. In 1911 there were fifty-seven cases; 1912, thirty-four; 1913 only four, yet in this year the army was increased nearly twenty-five thousand. These figures speak for themselves.

For internal medication ordinarily not much is required. Keep the patient quiet, mentally and physically, and in prone position, not rising to answer even the calls of nature when it can be avoided.

For the last year or two, I have used by

the mouth and have obtained good results, the following solution:

Rx.

Iodinegrs. II.

K. I. grs. VIII

Aquae dist, qs, adzz VI

Mft. sol.

Sig: Two or three teaspoonfuls every two or three hours.

Also sometimes use same solution per rectum, except dilute. Considerable reduction in the temperature is soon noticed, after which the iodine solution is diminished, but continued two or three weeks longer.

Tonsil Operations.—To prevent the inconvenient complications sometimes following tonsillar operations, such as reaction along the faucial pillars, edema of the uvula, soreness of throat, difficulty in swallowing and impaired speech, which he attributes to infection, G. P. Marquis, Chicago (*Journal A. M. A.*, July 10, 1915), recommends applying a 50 per cent. solution of tincture of iodine to the fossae immediately after removal of the tonsil. In spite of clean instruments and aseptic technic we have in the site of the removed tonsil an open space for invasion by the pathogenic bacteria always present in the oral cavity and the use of a powerful germicide is directly indicated. Of course all hemorrhage must be first controlled by a tampon saturated with alcohol or if this fails, by a hemostat to the bleeding point. The fossa is then painted with the iodine solution, which is also carried onto the pillars and the uvula.

Typhus Fever.—E. C. Hort states (*British Medical Journal*), that the most important points on which, when taken together, a positive diagnosis of typhus can be based, are: (1) The characteristic rash. (2) The smell of the skin. (3) A history of previous cases of the disease in the same house, especially if associated with lice. (4) The stuporous condition of severe cases presenting the rash. (5) The precritical fall of temperature. (6) The enormous relative and absolute increase in the large mononuclear cells in the blood. (7) The presence in blood films of the large diplobacillary and diplococcal organisms described by numerous observers. (8) Their presence also in fresh urine. (9) The presence in the centrifugal deposits of fresh urine of the minute Gram-negative, pleomorphic organism described by Hort and Ingram. (10) The isolation and cultivation of the same organism from the blood and cerebrospinal fluid. (1) The results of injection of cultures of these organisms, or of fresh typhus blood, into bonnet monkeys.—*Medical Record*, New York.

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NEXT MEETING STATE ASSOCIATION, LOUISVILLE

September 20, 21, 22 and 23, 1915

COUNTY SOCIETY REPORTS

Garrard—The Garrard County Medical Society held its monthly meeting at the Kengarlan Hotel, Thursday, July 15, at 2 P. M. with a full attendance, only two members being absent. Dr. A. W. Cain, Councilor, was present upon invitation and delivered an excellent address upon "The Modern Doctor" in which he gave good and wholesome advice. The doctor congratulated us upon the fact that every practicing physician in the county with the exception of a colored doctor were members of the society.

B. C. Rose demonstrated "Bandaging," in a scientific manner and all were benefited. It is a good idea to rehearse and add to our knowledge practical work. This is only the beginning of practical and clinical demonstrations that may be given in the future.

J. S. Gilbert intended reading a paper upon "Puerperal Eclampsia," but was called away upon professional business. The doctor will read his paper at the next meeting, the third Thursday in August. It is our rule never to excuse a member from contributing a paper when he is placed upon the program.

Our society has been in existence since 1902, and thought at times it was moribund, still the members have kept their dues paid up. We have not failed to meet once a month this year and shall continue as long as two or three can get together.

We have lost two physicians by removal, N. Mays has retired and has gone to Richmond to pass the remainder of his days. W. E. McWilliams has removed to Pulaski county where he will continue to practice.

The Councilor will be received with open arms any time he may wish to visit our society.

J. B. KINNAIRD, Secretary.

Floyd—The Floyd County Medical Society held its regular session at Allen, Friday, July 2, 1915.

Meeting was called to order by the President, E. H. Maggard.

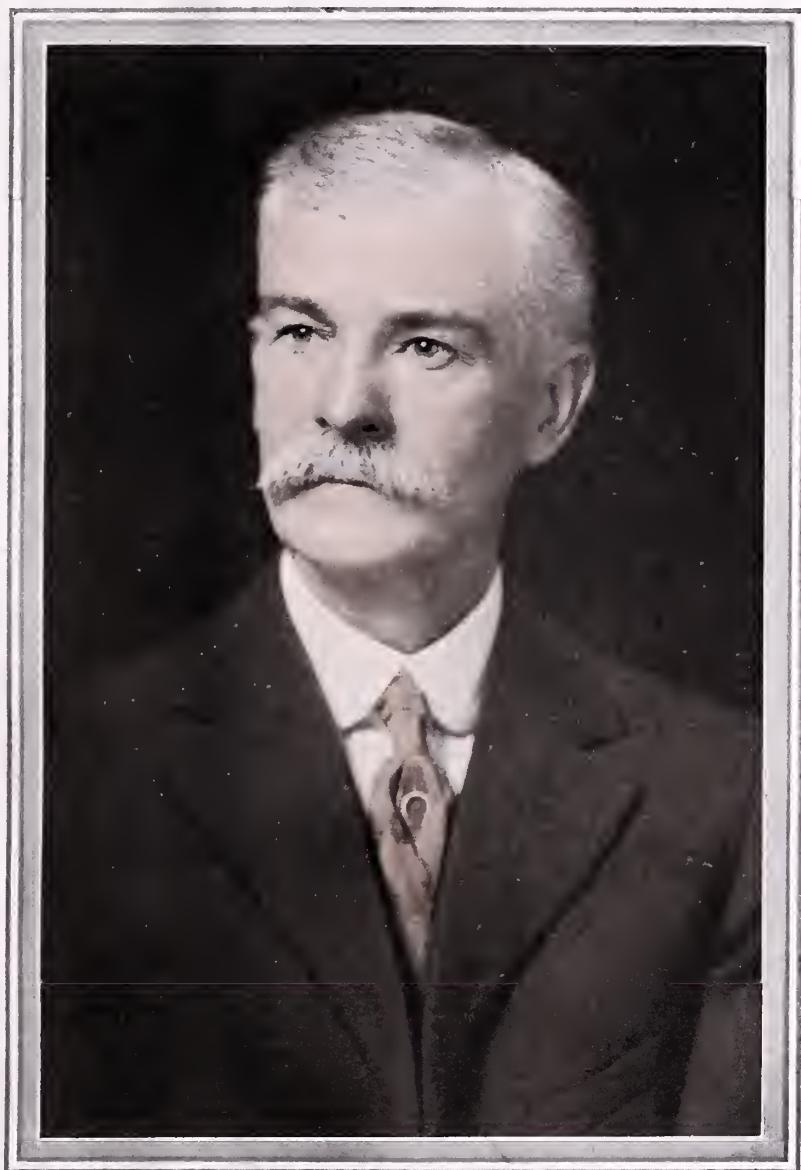
The subject of fees was discussed and a program for the next meeting arranged.

G. L. Howard is to read a paper on "Acute Intestinal Indigestion."

The following members were present at this meeting: E. K. May, Allen; Edward Stumbo, Allen; H. H. Mayo, Allen; T. T. Webb, Harold; E. E. Archer, Auxier; G. L. Howard, Falmouth; E. H. Maggard, Wayland; Frank Ramey, East Point.

Adjourned to meet again August 13, 1915.

M. V. WICKER, Secretary.



J. W. Kincaid

PRESIDENT KENTUCKY STATE MEDICAL ASSOCIATION, 1916

KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

Published Under the Auspices of the Council

VOL. XIII. 

BOWLING GREEN, KY., OCTOBER 1, 1915

No. 11

EDITORIAL.

THE LOUISVILLE MEETING.

Another annual session of the Kentucky State Medical Association has come and gone. In many respects this was probably the most successful meeting we have ever held. The attendance was a little larger; the program was a little better; the interest in the work of the organization was some more pronounced; the commercial exhibit was unusually good; politics was conspicuous by its absence; and the demonstrations in obstetrics and fractures were wonderfully successful, thanks to the labors of Drs. Speidel and Murphy.

In the election of the president, after the nominations had been made, it would have been difficult to have made a mistake. Dr. A. M. Vanee, who was elected, is one of the most distinguished surgeons in the whole country. Aside from this, he has always been interested in civic and professional betterment. More than any other man, he is responsible for the splendidly equipped and built new City Hospital in Louisville. His distinguished career insures for the Association an officer of the highest order during his incumbency.

Drs. Anderson of Newport and Stewart of Paducah were the contending candidates. The services of either of them to medical organization merited the honor to which their friends aspired for them, and the JOURNAL predicts their early recognition by the Association.

The next issue of the JOURNAL will contain the minutes of the House of Delegates and a number of papers of such importance that the various county societies will be requested to hold special meetings to consider them. Medico-legal matters have assumed such an angle that it is essential that every doctor in the State know about developments for his protection. The State Association is ready and willing to do for the doctors of the State all it can, but it is essential that we remem-

ber always that it is composed of twenty-four hundred active men and each of them must do his share to co-ordinate and make its work effective.

REMEMBER YOUR FRIENDS.

Of all the medical journals in the United States there is one editor who from time to time says things so incisively and so well that it is a pleasure to quote him under the above caption. In the August, 1915, *California State Journal of Medicine* Dr. Jones gives utterance to some sentences which should animate every reader of this JOURNAL and every thoughtful physician in Kentucky.

"There was a time, not so many years ago, when no respectable publication would refer to its advertisements or its advertisers. To be sure, many items boosting advertised things appeared in some periodicals—mostly medical (?) journals—but these were what is known as of the "reading notice" variety; carefully prepared by the advertiser and furnished to the publication; they were run as part of the advertising obligation. Now, however, and largely through the influence of your own Journal, all that has changed; we are proud of our advertisers and our advertising. Nothing goes into the advertising pages that is not as carefully scrutinized as the matter that goes into the reading pages. A considerable amount of advertising is refused each year because the Journal cannot vouch for the statements or the standing of the would-be advertiser, or for several other reasons. There is no reason, now, why any advertiser should not be referred to or anything advertised should not be mentioned in any part of the Journal. And please remember that these advertisers are your friends; they very materially help out the business of the Society by so liberally patronizing the advertising pages of your Journal. They offer, for your consideration, a constantly changing variety of things that it would pay you to take an interest in; there is always something new com-

ing along, and it will be well worth your while to see, from month to month, what new things are set forth in the advertising pages. You can save money, you can learn a lot that will be of benefit to you, and not infrequently you can secure samples or catalogues or premiums that are of real value. Also, just remember that there is no "bunk" about anything we advertise; if you are not entirely satisfied with your transactions with any advertiser, the Journal stands ready to straighten out the matter. The new things in this issue are too numerous to mention right here, but just look them up and see for yourself; if you have not looked through the advertising pages for a couple of months, it will surprise and please you to see the number and variety of new things and new suggestions set forth. The statements made and the information contained in our advertisements may be absolutely relied upon. Help your friends and those who help you. Read the advertisements in this issue."

SOME COMMON MISTAKES.

We desire to call to the attention of the readers of the JOURNAL a very important communication from Dr. Franz H. Harms, Pathologist of the National Pathological Laboratory in Chicago, in a recent issue of the *Journal of the Missouri State Medical Association* on "Some Common Mistakes in the Interpretation of Laboratory Reports." In view of the long standing card carried by this laboratory in our columns it has secured a considerable patronage and it is classed with the Louisville Research Laboratory and others of the most reliable in the country. It will be of interest to every physician who patronizes these Laboratories to remember the important errors to which Dr. Harms calls attention:

"There is a tendency to diagnose a nephritis *ipso facto* when the laboratory findings show the presence of albumin, and the severity of the condition is gaged by the percentage of albumin present. The object of this article is to emphasize the errors in these hasty conclusions.

"It is necessary at the outset to exclude false or accidental albuminuria due to admixture of the albuminous exudate, blood or lymph through the urinary tract, by examination microscopically of the sediment and also by consideration of the clinical picture. After a false or accidental albuminuria has been excluded, there are still the renal albuminurias without anatomic lesions of the kidneys which must be ruled out. These are classified by Saxe as: (1) functional albuminuria: (a) after severe muscular exertion, (b) after eating an excess of proteid food, (c) following nervous shock and other vasomotor changes,

(d) during labor, (e) in nervous children; (2) essential albuminuria: (a) cyclic, (b) orthostatic or postural, (c) albuminuria minima (Leroche and Talamon) after infections or debilitating diseases; (3) traumatic albuminuria, slight injury to kidney, massage of kidney, movable kidney, injury to brain, apoplexy; (4) hematogenous albuminuria, such as severe anemia, purpura, scurvy, cholera, diabetes, leukemia, severe wasting diseases and after anesthetics; (5) nervous albuminuria insanity, mental depression, psychoses, paralysis of certain parts of brain, epilepsy, delirium tremens; (6) albuminuria of renal stasis in conditions of passive congestion; cardiac, pulmonary and hepatic diseases in the presence of mechanical pressure (stones, tumors) may occur with casts and usually a few red blood cells; (7) toxic albuminuria, irritants (cantharides turpentine), poisoning with arsenic, mercury, phosphorus, lead, antimony, alcohol, mineral acids, febrile diseases.

"In many of these functional disturbances casts may be found.

"Only when these are ruled out and when the urine shows albumin and casts repeatedly and there are clinical symptoms as well, can a positive diagnosis of nephritis be made.

"The amount of albumin varies usually with the type of disease. In acute cases it is large in amount, becoming variable as it becomes chronic and small in amount in severe cases of contracted kidney. Exceptionally, however, the amount may be large when there is no kidney lesion at all, as in passive congestion, and on the other hand, albumin may be entirely absent at times in interstitial nephritis."

THE PROFIT AND LOSS ACCOUNT OF MODERN MEDICINE.

Under the above title one of the most delightful and readable collection of papers by an American author has just been published by Dr. Stewart McGuire of Richmond, Virginia. Everyone who knows McGuire admires and loves him, and every physician who reads this collection from his versatile writings will find that he has gained one of the profits of modern medicine. While many of the papers are surgical, they are written in a style that is so interesting and on a scope so broad that everybody will be interested in what he has to say. To one who comes in contact with medical publications frequently, it seems a pity that there are not more books published which show the originality, the genius, and the interest of this small one. L. H. Jenkins, of Richmond, Virginia, is the publisher, and copies may be ordered directly from him.

SCIENTIFIC EDITORIALS.**GASTRIC PHYSIOLOGY AND THE BITTER TONICS.**

I am constrained to believe that one of the most important of recent communications has been somewhat overlooked by editorial commentators, a contribution to the pharmacological knowledge of the bitter tonics in their action upon the human stomach. This article not alone adds directly to our sum total of knowledge, but upsets some of the well-rooted lay and medical ideas. A. J. Carlson, assisted by Miss Torchiani and Mr. Hallock contribute an article to the *Journal of the American Medical Association*, No. xxi under the caption of "Physiology of the Stomach" and sub-caption, the "Supposed Action of the Bitter Tonics on Secretion of Gastric Juice in Man and Dog" (Vol. lxiv., No 1, Jan. 2, 1915, p. 15), which, I think, not alone important from its own standpoint, but believe the results may be amplified and extended to other fields, comment upon which will be made in this writing. Speaking conventionally, all of us are or were in the habit of giving "tonic appetizers," that is to say, a bitter tonic, little realizing its actual futility or stopping to realize the far greater "appetizers" we have in other measures other than those *fetishes*, medicinal measures. Some day, I hope to present a psychological analysis of that medical narrowness characterized by the inability to realize therapy from any other than a chemical, pharmacologic or medicinal standpoint, but this large contract will have to be passed to some future time, pigeon-holed temporarily with many other items waiting patiently for attention. In order that we may more clearly understand the work done and the results achieved, I abstract from this paper the following:

"The so-called stomachics or bitter tonics acting in the stomach alone have no appreciable influence on the hunger mechanism when given in the usual therapeutic quantities. If the stomachics are taken by mouth in the ordinary way, all of them inhibit gastric tonus and hunger contractions in direct proportion to the intensity and duration of stimulation of the nerve endings in the mouth. If the bitters are introduced directly into the stomach in quantities considerably in excess of the therapeutic dose they all cause inhibition of the gastric tonus and hunger mechanism, evidently by stimulation of nerve endings in the gastric mucosa. In brief, the bitter tonics, in so far as they influence the hunger mechanism directly, cause inhibition or depression of hunger. According to Heubner and Reider, large doses of bitters also re-

tard the emptying of the stomach (dog). This must be due to a direct depression of the gastric movements of digestion, or to a retardation of the digestion process itself.

"It seems pretty well established that the bitters have no action on the pepsin-hydrochloric acid digestion itself, except possibly in way of slight retardation. This slight retarding action is of no practical significance, especially when the bitters are taken twenty or thirty minutes before the meal, or even just before the meal, because of the great dilution with gastric juice, saliva, and the fluids of the food. The literature also points to the conclusion that by themselves the bitter tonics are incapable of causing secretion of gastric juice either by acting in the mouth or in the stomach. Pawlow, noted in dogs that the bitters acting in the mouth cause a copious flow of saliva, but leave the gastric gland perfectly quiescent; and not even when introduced into the stomach do they cause secretion of gastric juice.

"It will be recalled that Mr. V., our man with permanent gastric fistula, has the esophagus completely constricted at the level of the upper end of the sternum, so that nothing can be swallowed from the mouth and reach the stomach via the esophagus. Above the constriction the esophagus is somewhat dilated so as to hold about half a glass of liquid. These conditions serve admirably for studying the influence of the bitters on the secretion of gastric juice.

"On all test days 100 c.c. of water were put into the stomach 120 and sixty minutes before the meal, so as to insure a completely empty stomach. The tonics were introduced into the stomach via the fistula between fifteen and thirty minutes before the meal time. In the series of tests with the tonics in the mouth, these were put into the mouth and swallowed into the esophagus pouch ten minutes before the meal.

"The experiments were made during the months of April to November, 1914. The tests with the tonics were interspersed with controls without the tonics all the way, so as to eliminate as far as possible the errors from variations in nutrition, appetite, etc., associated with variations in climate and bodily activity.

"It was aimed to make these tests a mere incident to Mr. V.'s daily routine. For that reason no special dietary standard was fixed. The ingredients of the noonday meal Mr. V. selected for himself at a nearby cafeteria. He naturally selected what appeared to him most palatable from day to day. The evening meal was taken in the same boarding house throughout the experimental period. Mr. V. states that the boarding house meals are very

much the same from week to week, and less palatable than the noonday meal.

"The tonics used (in therapeutic doses) were tinctures of gentian, quassia, calumba, humulus and condurango, and elixir of quinin, strychnin and iron. Most of the tests were made with the gentian tincture and with the elixir.

"In order to exclude all possible psychic factors, Mr. V. was not told of the purpose of the experiments. He went about his daily work, taking his usual food at the usual time, while now and then a tonic was given and the appetite secretion measured. I think it may be safely concluded that such psychic factors as knowledge of and faith in the remedies were carefully excluded in these tests.

"As Mr. V. is a young man in good health, the question naturally arises whether the sensory nerves for the appetite sense (in mouth and stomach) are not normally in a state of maximum excitability, so that no further increase in excitability by bitter tonics is possible. This objection seems to be met by the lower secretion at the evening meal. Here is a condition in which less palatable food should have been rendered more palatable by contrast with the bitter tonic, or by actual increase in the excitability of the gustatory nerves. The results indicate no improvement by contrast. If the bitters in the mouth augmented the excitability of the taste nerves at the evening meal, this evidently caused an already unpalatable food to taste still more unpalatable, and hence the diminished appetite secretion.

"These bitters in mouth or stomach produced no change in the acidity and in the pepsin concentration of the appetite gastric juice.

"The annual experiments were performed on five dogs and may be summarized as follows: namely, that these bitters acting in the mouth or in the stomach have no effect on the secretion of gastric juice in the dog, nor did they influence or produce any changes in acidity or pepsin concentration. But as regards any favorable action of these stomachics on the gastric secretory mechanism in man and dog, our results go to show that it is nil, at least when all purely psychic factors are eliminated.

"The use of bitters as medicine goes back so far that there is no authentic record of its beginning, and the number of different kinds of bitters advocated from time to time as useful is a large one. They are of so varied chemical composition that the only thing they have in common is the bitter taste. Of course, in this discussion, we do not include such substances as quinin or strychnin, or the bitters with alcohol as the main constituent, as these substances have distinct physiologic actions

not directly related to appetite after absorption into the blood.

"The bitter tonics are still common 'home remedies' and favorite 'drug-counter prescriptions'. They are often prescribed as a matter of routine and sometimes ordered because the physician actually believes they produce good results. Is this belief well founded? These tonics are given to convalescents who would continue to improve, tonic or no tonic, and the tonic, not the recuperative power of the patient gets the credit. For many ailments the physician prescribes a more hygienic living and a tonic. The patient's health improves and both physician and patient think the tonic did it.

"But even if the bitters have no direct action on gastric secretion and digestion, and no appreciable indirect action on the secretion of gastric juice, may they not be valuable aids in expelling worry and in implanting hope and good cheer in the mind of the patient? May they not be an efficient handmaid to psychotherapy? According to Cushny that is their main, if not their only value. There is no question that the bitter tonics connect up with the popular belief that the potency of a medicine is directly related to its strong (or bad) taste. And the readiness with which these tonics are dispensed by the physician nourishes the popular superstition that there is, or must be, a specific drug remedy for every ailment, a superstition that constitutes the open sesame of the medical quack and the patent medicine vender.

"The stimulation of certain nerve endings in the mouth and in the normal gastric mucosa unquestionably contributes to the complex sensation of appetite, and these nerves are stimulated by condiments and flavors of food. Apart from this, the physiological way of augmenting hunger and appetite is moderation in the food intake or increasing the utilization of the food in the body work and cold. If these measures do not improve, the chances are that the digestive tract is not in a condition to take care of the amount of food demanded by the stronger hunger and appetite sensations.

"To be sure, in therapeutic doses these tonics may be harmless, except in so far as their use contributes to the drug habit in emphasizing the 'take something' instead of the 'do something.'

"The prescription of bitter tonics is a fetish, a survival of the days of ignorance, of savagery and should be abandoned. Why they are ordered, or what they really accomplish for the person who takes them, has usually either been answered in only the vaguest terms, or overlooked entirely by teachers of therapeutics. Nor must it ever be forgotten that appetite and hunger are by no

ORIGINAL ARTICLES

SOME OBSERVATIONS ON THE OSSIFICATION OF THE BONES OF THE HAND.*

By J. W. PRYOR, Lexington.

Previous to the advent of the X-ray all findings, as to the time of appearance of ossification in bones, and other features pertaining to the process of ossification were dependent upon specimens obtained from the dead house. Obviously all conclusions were based upon the examination of comparatively few subjects. Many errors that have been perpetuated in standard works of anatomy are due to these facts.

In a Bulletin of the State University of Kentucky published April, 1908, I gave the results of the examination of the hands of five hundred and fifty-four (554) children from three months to fourteen years of age. Over two hundred (200) of these were under seven years of age.

The name, age, number of child, order of ossification and size of nucleus in M.M. was given.

A careful study of these negatives resulted in the following observation:

First. The process of ossification is inaugurated much sooner than hitherto supposed.

Second. The bones of the female ossify in advance of the male. This is measured at first by days, then months, then years.

Third. The chronological order in which the bones of the corpus are ossified is different from that formerly supposed.

Fourth. The bones of the first child, as a rule, ossify sooner than those of subsequent children.

Fifth. Regardless of the variations (normal) the ossification is bilaterally symmetrical.

Sixth. The union of the epiphyses with the shaft takes place much sooner than formerly supposed.

Seventh. Variation in the ossification of bones is a heritable trait.

The limits of this article will not permit of more than a reference to each of these observations.

First. The process of ossification is inaugurated much sooner than hitherto supposed.

We have in the illustration shown upon the screen proof of this statement. This is the hand of C. G. B., female, age 1 year, 8 months and 24 days. Points of ossification are shown in all stages of development, from a pin point

to that of an advanced stage. The size of the nucleus of the os-magnum and unciform shows that they appeared early in the first year.

The os magnum is the first bone in the human carpus to begin the process of ossification. In the hand of the female, the first point will make its appearance before the child is six months of age. In exceptional instances ossification may begin before birth.

In all of the hands of those under three years of age, the size of the nucleus would indicate the average appearance of the magnum between the third and sixth month, and that of the unciform a few months later. The cuneiform will make its appearance between the second and third years. The fourth bone of the carpus to begin ossification is the semilunam, the nucleus of which will appear between the third and fourth year; while that of the scaphoid will appear when the child is about four years of age, or early in the fifth year. It is only in rare or exceptional instances that you find the semilunar or scaphoid appearing after the child is five years of age.

The trapezoid and trapezium will make their appearance between the fourth and fifth year, in the order named. The last bone, or pisiform, will begin ossification between the ninth and tenth year. An examination of the table will show that in only six instances can we record the absence of any of the bones that should be present when the child was six years of age or older.

My investigation along this line brought me to the following conclusions in regard to the time of appearance of points of ossification in the bones of the carpus.

1. Os Magnum.—Female, between the third and sixth month. Male, between the fourth and tenth month.

2. Unciform.—Female, between the fifth and tenth month. Male, between the sixth and twelfth month.

3. Cuneiform.—Female, between the second and third year. Male, when about three years of age.

4. Semilunar.—Female, between the third and fourth years. Male, when about four years of age.

5. Scaphoid.—Female, at four years of age or early in fifth year. Male, when about five years of age.

6. Trapezoid.—Female, between fourth and fifth years (preceding trapezium). Male, between fifth and sixth years (preceded by trapezoid).

7. Trapezium.—Female, between fourth and fifth years (preceded by trapezoid). Male, between fifth and sixth year (preceded by trapezoid).

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

CHRONOLOGICAL TABLE

	MORRIS	CUNNINGHAM	GRAY	HOLDEN	POLAND	PRYOR
EPIPHYSES	METACARPUS					
	{ FIRST. 3rd to 5th year. About three years. Third to fifth year. 2½ to 5 years					{ F
	{ SECOND. 3rd to 5th year. About three years. Third to fifth year. 2½ to 5 years					{ M
	{ THIRD. 3rd to 5th year. About three years. Third to fifth year. 2½ to 5 years					{ M
	{ FOURTH. 3rd to 5th year. About three years. Third to fifth year. 2½ to 5 years					{ M
EPIPHYSES	{ FIFTH. 3rd to 5th year. About three years. Third to fifth year. 2½ to 5 years					{ M
	{ MIDDLE. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ F
	{ RING. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ F
	{ INDEX. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ F
	{ LITTLE. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ F
EPIPHYSES	{ THUMB. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ F
	{ INDEX. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ F
	{ MIDDLE. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ F
	{ RING. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ F
	{ LITTLE. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ F
EPIPHYSES	{ RAPIDS. In 2nd year. Second or third yr. Second or third year. About two years. Early in second year.					{ F
	{ ULNA. Fourth year. Sixth year. About fourth year. About fifth year. About fifth or sixth year.					{ M
	{ INDEX. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ M
	{ MIDDLE. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ M
	{ RING. 3rd to 5th year. About three years. 1st row 3 to 4 yrs; 2nd and third rows 1 year later. Third to fifth year. 2nd and 3rd rows 4 to 5 yrs.					{ M

Pisiform.—Female, between the ninth and tenth years. Male, between the twelfth and thirteenth years.

In this illustration the points of ossification of the epiphyses of the metacarpal bones and those of the phalanges give evidence that these bones begin the process of ossification much sooner than hitherto supposed.

The table herein given is compiled from standard works, with the addition of my conclusions.

The table herein given is compiled from points of ossification in the epiphyses of the hand including those of the lower extremity of the radius and ulna.

The second observation. The bones of the female ossify in advance of the male. This is measured at first by days, then months, then years.

While this fact may be said to have been obvious the progressive differences have never been so graphically shown.

I will illustrate this with the hands of twins of the same sex in which there is a development of the same degree, while in twins of different sex the hand of the female is much in advance of that of the male. I have a number of negatives of brothers and sisters' hands showing the marked difference in development.

I also append an extract from an article on "The Development of the Bones in Early Life," by Thomas Morgan Rotch, M. D., Professor of Pediatrics, Harvard University.

"Through the courtesy of Professor Pryor, I am making use of his table of Anatomic Index which shows the marked difference in time of the anatomic development of girls and boys.

Table VI.—Comparison of the Development of the Wrist Index According to Sex.—(Pryor).

A. Magnum, unciform. Female, 1-2 year; Male, 1 year.

B. Magnum, unciform, radius (lower epiphysis). Female, 1 1-2 years; Male, 2 years.

C. Magnum, unciform, cuneiform. Female, 2 1-2 years; Male 3 1-4 years.

D. Magnum, unciform, radius, cuneiform, semilunar. Female, 3 1-2 years; Male, 4 1-2 years.

E. Magnum, unciform, radius, cuneiform, semilunar, and one of the following: Scaphoid, trapezoid, trapezium. Female, 4 1-4 years; Male, 5 1-4 years.

G. Magnum, unciform, radius, cuneiform, semilunar, scaphoid, trapezoid, trapezium. Female, 5 1-4 years; Male, 6 3-4 years.

H. Magnum, unciform, radius, cuneiform, semilunar, trapezoid, trapezium, ulna (lower epiphysis). Female, 6 1-4 years; Male 7 1-4 years.

I. Same as H., but more advanced. Female, 7 1-2 years; Male 9 years.

J. Same as I, but more advanced. Female, 8 1-2 years; Male, 10 years.

K. Magnum, unciform, radius, cuneiform, semilunar, scaphoid, trapezoid, trapezium, ulna. pisiform.

The following illustrations given to me by Dr. Pryor lead me to believe that somewhat different rules should be adopted for the grading of girls than for that of boys. In fact, there is such a manifest difference in the chronologic, physiologic, and anatomic ages of human beings in the formative stage of life according to sex, that we should endeavor to practically make use of the knowledge in our efforts to safeguard their lives."

The third observation. The chronological order in which the bones of the carpus are ossified is different from that formerly supposed.

In the table previously published I have included only those in which the chronology was distinct. There is, of course, opportunity for error in this. There may possibly be a much larger proportion of cases in which the unciform has preceded the magnum than is indicated by their relative size. There could not be great error in this, at least not enough to materially change the result or influence the conclusions. I have not tried to obtain a large number of subjects under one year of age for the reason that the results were uniform in such a large majority that it seemed unnecessary. The magnum is a larger bone than the unciform and the nucleus of the former will soon exceed in size the latter. This would indicate that the rate of deposit of lime salts in the larger bone would exceed that of the smaller bone. However, the larger size of the nucleus does not always indicate priority of appearance.

The deposit of lime salts in anticipation of the shape of the completed bone is fairly uniform in all instances, and is peculiar to each bone.

In all of the bones of the carpus the first appearance is that of a pin point. This will become round and then elongate and as it enlarges the shadow will be characteristic of each bone. Thus that of the magnum will be longer in the vertical diameter and is usually constricted in the middle. The unciform always assumes a triangular shape, with the apex toward the center and directed obliquely downward and inward. The cuneiform becomes oval the long diameter obliquely downward and inward.

The semilunar remains round on the surface, but often becomes pyramidal. The scaphoid rapidly grows in the long diameter of the bone and soon distinctly anticipates

the boat shape. The trapezoid and trapezium remain round until they are quite large. Although the palmar surface of the bone is in contact with the plate, the shadow cast is largely determined by the dorsal surface which is interposed between the tube and the plate, thus obstructing the rays. When the negative is compared with the bone, the resemblance to the dorsal surface is distinct.

I am sure that in this table I submit, there is sufficient proof that the usual order of ossification of the bones of the carpus is as follows: (1) Os Magnum; (2) Unciform; (3) Cuneiform; (4) Semilunar; (5) Scaphoid;

(6) Trapezoid; (7) Trapezium; (8) Pisiform.

CHRONOLOGICAL ORDER OF OSSIFICATION

POSITION	Magnum	Unciform	Cuneiform	Semilunar	Scaphoid	Trapezoid	Trapezium	Pisiform
FIRST	238	5						
SECOND	5	238						
THIRD			219	12				
FOURTH			10	176				
FIFTH				8	80	36	30	
SIXTH				2	27	59	31	
SEVENTH				6	19	21	51	
EIGHTH								19
TOTAL	243	243	229	204	129	124	119	19

Fourth. The bones of the first child, as a rule, ossify sooner than those of subsequent

	NAME	SEX	AGE	CHILD OF PARENTS	MAGNUM	UNCIFORM	CUNEIFORM	SEMI-LUNAR	SCAPHOID	TRAPEZOID	TRAPEZIUM	PISIFORM
1	R. M.	F.	8—1—6	3	2	1	3	4	5	6	7	
	G. M.	M.	8—5—11	4	2	1	3	4	5	6	7	
	P. M.	M.	1—11—16	5	2	1						
2	H. P. R.	F.	5—11—16	1	2	3	3	4	7	5	6	
	C. R.	F.	3—7—26	2	1	2	3	4		5	6	
	J. K. R.	M.	2—1—7	3	1	2						
3	M. L. B.	F.	8—4—13	2	1	2	3	6	5	4	7	
	C. B.	F.	5—9—11	3	1	2	3		5	4		
	J. B.	M.	6—4—0	1	2	3	3	6	4	5	7	
4	A. M. R.	F.	8—2—14	1	1	2	3	5	4	7	6	
	E. G. R.	M.	5—10—3	2	1	2	3	5	4			
5	M. E.	F.	5—7—0	1	1	2	3	5	6	7	4	
	J. E.	M.	4—1—19	2	1	2	3				4	
6	H. W.	M.	5—2—21	1	1	2	3	4			5	
	E. W.	F.	3—6—21	2	1	2	3	4	6		5	
7	L. B. M.	M.	9—9—14	7	1	2	3	4	7	6	5	
	R. M.	M.	8—2—21	8	1	2	3	4		6	5	
	W. M.	M.	7—3—25	9	1	2	3	4	6		5	
	E. M.	M.	7—5—5	10	1	2	3	4	6		5	
	J. M.	F.	6—2—5	11	1	2						
	L. M.	M.	2—7—19	12	1	2	3	1	5	6	7	
8	B. R.	F.			1	2	3	4	5	6	7	
	E. R.	F.			1	2	3	4	6	7	5	
9	M. K.	F.			1	2	3	4	6	7	5	
	M. K.	F.			1	2	3	4	7	6	5	
10	B. S.	F.	6—7—7	8	1	2	3	4	7	6	5	
	B. S.	F.	6—7—7	9	1	2	4	3		5		
11	W. L.	M.	5—4—5	1	1	2	4	3	6	5	7	
	W. L.	M.	6—10—16	1	1	2	4	3	6	5		
	A. L.	M.	5—8—21	2	1	2	4	3	6	5		
12	P. L.	F.	5—6—20	3	1	2	3	6	5	7	4	
	S. G.	F.	5—0—1	2	1	2	3	6	5	7	4	
	G. G.	F.	4—6—7	3	1	2	3	4	5	6	7	
13	J. D.	M.	8—3—5	1	1	2	3	4	5	6	7	
	G. D.	M.	6—8—21	4	1	2	4	6	4	5		
	P. D.	F.	5—1—0	5	1	2	3	4	5			
14	T. N.	M.	5—3—5	3	1	2	3	4	5		6	5
	L. N.	M.	6—0—0	4	1	2	3	4	7		6	5
15	J. V.	M.	7—4—9	3	1	2	3	4		6	5	
	P. V.	F.	5—0—0	4	1	2	3	4	7		5	6
16	E. M.	M.	9—0—9	2	1	2	3	4	7	5	6	
	J. M.	F.	5—0—0	3	1	2	3	4	7	5	6	
17	J. S.	M.	7—3—0	3	1	2	3	4		5	6	
	C. S.	M.	6—8—19	4	1	2	3	4		5	6	
18	S. F.	F.	6—0—16	1	1	2	3	4	5			
	A. F.	M.	6—5—0	2	1	2	3	4		5		
	C. F.	F.	5—0—26	3	1	2	3	5	4			
19	N. H.	M.	6—3—10	1	1	2	3	7		6	5	
	L. H.	F.	5—5—23	2	1	2	3	5	6	7	4	
20	G. G.	F.	7—5—0	1	1	2	3	5			4	
	M. G.	F.	4—3—21	2	1	2	4	5	7	6	5	
21	Louis	M.	7—2—23	3	1	2	4	3			5	
	Lillie	F.	5—6—16	4	1	2	4	3			5	

children. While we have some evidence of this it is not uniform by any means and I am disposed to qualify this statement.

Fifth. Regardless of the variations (normal) the ossification is bilaterally symmetrical.

In the illustration shown on the screen this is clearly depicted.

Sixth. The union of the epiphyses with the shaft takes place much sooner than formerly supposed. My conclusions, after the examination of a large number of hands between the ages of twelve and twenty-two were as follows.

Union of Epiphyses.—(Pryor.)

Lower epiphysis of radius: Female, 17 to 18 years; Male, 20 to 21 years.

Lower epiphysis of ulna: Female, 16 to 17 years; Male, 19 to 20 years.

Epiphyses of the metacarpal bones: Female, 15 to 16 years; Male, 17 to 18 years.

Epiphyses of the phalanges: Female 15 to 16 years; Male, 17 to 18 years.

In every instance the epiphyses of the metacarpal bones and those of the phalanges were united in the female by the sixteenth year and in many instances before the fifteenth year.

The illustration shown is that of a female hand 14 years and 10 months of age.

Seventh. Variations in the ossification of bones is a heritable trait.

My belief that normal ossification of bones present evidence of heredity is based upon the fact that we may find similar conditions in the chronological order of ossification of the bones of the carpus and when extra epiphyses are found to be present they may be found in the hands of the brothers and sisters.

I have only met with a few instances in which there was an extra epiphysis present. Such as that occasionally found at the proximal extremity of the metacarpal bone of the index finger. Unfortunately when I did find this extra epiphysis present, they were in most instances the only children of the parents and I have not been able to follow the families.

I have had abundant opportunity to observe the similarity of the order of ossification of the bones of the carpus in the hands of brothers and sisters. I have followed these cases through a number of years. In some instances I have made examinations several times during the year and when necessary during the period of several years in succession in order to obtain results.

It will be seen from the following table there may be a number of variations from the usual order and it is this variation I find to be a heritable trait.

When I submitted the result of the examinations of my first ten families I thought there

were no exceptions but a later examination of several of these same cases gave different results. I have made these corrections in the table on Page 484.

COMMON SENSE IN DERMATOLOGY.*

By M. L. RAVITCH, Louisville.

Dermatology is a branch of medical science of which very little is taught in most medical schools and which, therefore, is but little understood by most men on graduation. Even after graduation the general practitioner or specialist in other lines devotes but little time to this branch, since the external appearance of many dermatoses is so similar that it is very hard for him to study them without an experienced instructor. If the general practitioner is ignorant of the external aspects of the diseases of the skin and scalp, what shall we say of his knowledge of their pathology, etiology and chemical changes? Common sense is the subject selected for me by the framers of this program. Common sense in dermatology, like common sense in any other line of medicine is nothing more than the forming of logical conclusions from all the data necessary by means of scientific principles. Treatment of diagnosis without a thorough examination and history of the case and a firmly based foundation of the pathology of the entire body can not be sensible whether it concerns a dermatological lesion or a gastric ulcer or a case of typhoid fever. Common sense also demands that one be familiar with one's tools, familiar with all of them that are of any use, familiar with their uses and dangers. Then one must use them sensibly, i.e., one must know what one wants done and which one is going to do that particular thing best. Lassar's paste, ichthyol, sulphur, corrosive sublimate and arsenic, to mention a few of the most commonly used drugs in dermatology, all have their places in therapeutics; each is of value in certain cases, none is a cure-all; often none of them is as useful as some physical method such as the Roentgen ray, ultra-violet light, heat, cold, etc. Common sense will tell which one is best for each individual case; yet what may be common sense to-day may not be common sense to-morrow, since a better agent may be discovered than the best one now in use, and, perhaps, a more rational one. A good many topical and internal remedies were used in the treatment of diphtheria before the discovery of the anti-toxin, but all these remedies were empirical with poor results as a consequence, even though they were the best agents then at hand to fight the disease with and the use

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of them sensible. Now nearly every physician uses common sense when he uses anti-toxin, since its use is advocated by his knowledge of theoretical biological reactions, clinical experience and the authority of others. Moreover it may be common sense to still use some of the old weapons against diphtheria as adjuncts to the anti-toxin treatment.

I recall a case of leprosy that was treated for syphilis and various other diseases for many years, with negative results. Had the diagnosticians who saw this case been familiar with the lesions of leprosy, even as gathered from text-books and plates, their common sense would have told them that this case was leprosy. Another case that I recall in this instance is that of an infant who was saturated with bromides for convulsions, the latter probably due to indigestion; after some time had passed the child developed a typical bromide eruption which did resemble small-pox to a remarkable extent. The infant, with its mother, were rushed off to the pest-house where they remained a couple of weeks, with no change in the eruption, until finally the proper diagnosis was made. Had the physicians in charge of this case taken a thorough history of it they would have learned that the child had convulsions and was being treated for it; then their common sense would have suggested the connection between convulsions, bromides and this eruption. But they hadn't used common sense in finding out these important facts in the history of the case.

Would we think a jeweler used common sense if he attempted to find out what was wrong with a watch by examining only one small part instead of every wheel? Common sense in dermatology does not mean the ability to apply this or that salve or lotion; it means the ability to go into a case thoroughly, it means the right diagnosis and remedy, it means knowledge plus logic. It is required even in the administration of specific remedies, just as much as common sense is required even in the treatment of malaria with quinine. Every practitioner knows that chrysarobin is the great weapon against psoriasis, yet few know how to apply it. Chrysarobin is a very severe remedy and only in certain stages of the disease will the skin tolerate it. Alkali-free chrysarobin, applied to the skin in ointments and varnishes, forms on the skin an oxy-chrysarobin, probably due to the presence of the unsaturated fatty-acid compound, oleic acid, in the skin normally, and it is this oxidative process that causes the severe reaction that we so often see. Would it be common sense if we employed the same kind of salve to treat impetigo, sycosis, trichophytic infections and epitheliomas? Yet some of the proprietaries on the market are

recommended for such widely different conditions. Could we sensibly expect to get good results without the microscope and other laboratory methods? Two cases with serious skin lesions, with considerable destruction of deeper structures and very stubborn in their resistance to usual methods of treatment, were shown by bacteriological examinations to be pneumococci infections; a vaccine was prepared, and the lesions quickly healed under the treatment. Intertrigo is another disease that baffles the general practitioner. The treatment is simple if one uses common sense. We must remember that it is fat persons and children that are particularly apt to suffer from this disease, and that it is a hot weather disease. The heat causes excessive secretion of sweat, especially in the folds of the skin, and maceration of the skin follows. This macerated and devitalized skin is an easy prey to infection, especially by the staphylococci already present in the superficial layers of the epidermis. Instead of using salves which by themselves and through holding the secretion in the skin increase the maceration, a weak alcoholic bichloride solution should be employed, followed by a mild dusting powder. This causes a prompt improvement, since the bichloride is an antiseptic and the alcohol and the powder dry out the skin.

Diseases due to disturbance of metabolism are easily managed if we correct the cause. In stubborn cases of weeping eczema in children no external remedy makes any impression unless we have corrected the diet. Such children are usually over-fed or improperly fed, and the withdrawing of fat, increasing the intake of calcium salts and employing some mild intestinal antiseptic will improve conditions even without any external remedies in many cases. Erythemas and eczemas often follow gout, due to the deposition of urates in tophi, and no external remedy will accomplish much unless we increase the elimination of these salts by the administration of salicylates and urotropin. Xanthoma, which manifests itself as elevated yellow patches in certain parts of the body, particularly near the eyes, is often mis-diagnosed and mistreated by the general practitioner. As this disease is due to diabetes, sugar in the urine should make our diagnosis for us, so the value of urinalysis in dermatology can be seen. An elderly man came to me with an intense itching over the entire body, with eczematous patches scattered here and there. Urinalysis revealed a large amount of sugar; this was causing the itching, and his scratching had caused the eczema. A carbohydrate free diet with a mild lotion relieved him very quickly. Pruritus of the genital organs also often occurs in diabetes. The sugar-laden urine favors suppuration and rapid growth of bac-

teria. Itching dermatitides are common. A bronze-colored skin, reminding one of Addison's disease is a distinctly bad omen.

Diseases of the liver and gall-bladder which cause icterus may lead to an intolerable pruritus. Albuminuria and toxic nephritis are liable to cause various dermatoses. Infants fed on artificial foods are apt to develop scurbutus and a peculiar nodular dermatitis on the legs. No salves or lotions will relieve these troubles until the constitutional cause is discovered and corrected.

Chlorosis, oedema and malaria are some more conditions that may cause certain dermatitides. Here blood examinations are of the greatest value in enabling the physician to recognize the underlying aetiological factors. Focal infections frequently cause chronic urticarias, while if rheumatism results we may expect also purpuras and erythemas. The tonsils are the chief seats of focal infections and I have often seen their removal followed by the disappearance of long-standing dermatoses.

Common sense must be employed in determining how long to use certain drugs. We must not forget that the prolonged use of certain remedial agents is not without detrimental effect upon the human organism. Also we must not overlook the possibility of causing anaphylaxis. It is wise to use mechanical and physical methods of treatment as much as possible, rather than over-do the drug-treatment.

It is in the treatment of syphilis especially that one must use one's own common sense. With the status of the salvarsans still in dispute and no absolutely authoritative opinion recognized, each one of us must decide for himself how much he intends to rely upon the new arsenical preparations, which one to use and how long and in what manner he shall employ mercurials. However, in view of the failures that we have all seen follow the use of salvarsan alone, it does not seem to me to be common sense to hold it up to the patient as an ideal remedy that is going to cure him in one or even two injections by itself. Rather should we be more conservative in the estimation of the time of treatment necessary, and rather than become wildly enthusiastic over any one preparation we should use them all as indicated, one as an adjunct to the others, nor neglect mercury which seems still to be the remedy that the physician must in the main rely upon.

One way in which we can profitably use common sense is in recognizing that drugs and chemicals do not change their nature simply because some manufacturing house puts a label and a fancy name to them. Judge all these preparations by what you know of their ingredients; they will be no better than the

same ingredients unlabeled, no matter how many wonderful claims are made for them.

To recapitulate what I have been attempting to make clear: if you would use common sense, first obtain a working knowledge of dermatological diseases, investigate every case thoroughly, making out a complete history and doing or having done whatever laboratory examinations are necessary. Then with your facts before you stop and think out the diagnosis logically, and lastly treat carefully, cautiously and conservatively.

DIFFICULT PRESENTATIONS.*

By J. T. REDDICK, Paducah.

Successful obstetrical practice becomes more and more a surgical procedure in these days, and more so as presentations differ from the perfectly normal.

All presentations are difficult as they differ from normal, in so far as there is a disproportion between the size of the child and bony canal of the mother, or other obstructions in the parturient canal, such as fibroids, ovarian tumors, etc. A hydrocephalic fetus or contracted pelvis may make any presentation a difficult one.

A difficult presentation may be such as to render an obstetrical case a minor surgical procedure, such as a simple forceps delivery, or a most difficult and dangerous procedure to both mother and child requiring the best judgment and surgical equipment of the attending physician.

The modern hospital and the perfection of surgical technique have had a tendency to relegate to almost complete oblivion all mutilating obstetrical operations and some of our most capable obstetricians predict that the use of the obstetric forceps will soon be a thing of the past.

In recent correspondence with Dr. Edward Speidel the distinguished gentleman who follows this paper in a "Practical Demonstration of Difficult Presentations," he said to me, "I claim that the obstetrical forceps will be obsolete in ten years from now, and that when the forces of delivery, aided in proper instances by pituitrin fails to effect the births, that Cesarean section will be resorted to in proper surroundings."

I do not think I can quite agree with that statement; it is too radical. There are many cases where the forceps may be used most advantageously. We find some cases where pituitrin does not have the desired effect. We are practicing medicine to relieve pain, and often it is unwise to let the head remain a long time on the perineal floor when the small

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amount of *vis-a-fronte*, added to the *vis-a-terge* force will speedily and safely terminate labor.

A great many cases of minor disproportion between child and pelvic outlet may be remedied by forceps as safely as with pituitrin.

The mortality in early cases of Cesarean section was very high, but it has grown steadily less under improved hospital advantages and improvement in surgical technique, until now, in selected cases and in competent hands it ought to be as safe as is the operation of abdominal section for any other cases. Some surgeons claim it is the safest procedure in cases of placenta previa. The facilities for hospital work and the competency of the operator would be the determining factors in cases of that kind so far as the mortality is concerned.

I do not recall that I have seen anything in the literature regarding the propriety of Cesarean section in transverse positions, but in cases of primipara especially, I think I am safe in saying that in a hospital with a good operator, the case would be safer than in the private home, under the old operation of version.

The operation of Cesarean section is now being done in eclamptic cases; perhaps the pendulum is swinging too far that way, but take for instance an eclamptic at or near term pregnancy for the first time, with an undilated cervix and a living baby, no doubt its delivery, under proper conditions, would be safer to both mother and child, and with less shock, than by forced dilatation and dragging it through the natural passages. This is a digression from the title of my paper, but it is for the purpose of getting an expression along these lines from this distinguished assemblage.

OCIPITO-POSTERIOR POSITIONS.

Occipito-posterior positions are frequently difficult, very tardy and may result in severe lacerations of the perineum. Ordinarily the head becomes markedly flexed and lengthened in the mento-occipital diameter and finally the region just anterior to the large fontanelle impinges upon the lower margin of the symphysis and the occiput is slowly pushed over the perineum. Great care should be exercised in placing forceps in these occipito-posterior positions or damage may be done the child. Mortality and morbidity are higher for both mother and child in occipito-posterior positions, as it involves exhaustion and sepsis from prolonged labor and frequently necessary operations and laceration, and asphyxia and other dangers to the child.

FACE PRESENTATIONS.

Face presentation occurs once in about every 250 cases. It is generally stated that

face presentations do not exist during pregnancy but are caused by extension of the head at the superior strait at the onset of labor. Some authors claim to have had cases in which they were diagnosed during pregnancy. Any factor which interferes with engagement of the head favors the production of face presentation; a very large child or contracted pelvis may cause a face presentation. Severe injuries to the maternal soft parts and foetal asphyxia are necessary complications in these cases.

BROW PRESENTATIONS.

Some authors do not consider brow presentations and it is difficult to get reliable figures to show the relative frequency of brow presentations. DeLee says perhaps once in 3,000 cases is as near accurate as is possible to get. The prognosis in a brow presentation is bad for the fetus and more serious for the mother than either face or vertex presentation.

BREECH PRESENTATION.

I will only mention breech presentations that Dr. Speidel may demonstrate by means of the manikin the method of dealing with these cases.

TRANSVERSE PRESENTATIONS.

A transverse presentation is an error of polarity of the fetus, the long axis of the child crosses the long axis of the mother. The dangers to both mother and child are very materially increased by a transverse presentation. To the mother on account of the necessary manipulation necessary to correct the malposition, the dangers of infection and injury to the birth canal and to the child, especially if the case is seen late, on account of the necessary force that is required to place the fetus in proper position to be delivered.

DISCUSSION.

Edward Speidel: The essayist preceding me has quoted me as saying that the obstetrical forceps will be obsolete in ten years from now and that when the forces of delivery aided in proper instances by pituitrin fail to effect the birth, that Cesarean section will be resorted to in proper surroundings. With a little explanation I believe I can convince you that the statement is not quite as radical as it would at first appear.

First of all I only advocate the use of pituitrin, when the cervix is fully dilated, the bag of waters ruptured and the head has descended into the pelvis. If the head has not descended under such circumstances then you already have an indication for Cesarean section.

The high forceps operation has been abandoned by even expert obstetricians as too dangerous for mother and child. The low forceps operation on the head resting upon the perineum has practically been displaced by pituitrin guarded by chloroform in the hands of those experienced in

its use. The condition is generally due to uterine inertia and fear of the pain caused by the distention of the perineum. It is surely safer and more natural to effect delivery under such circumstances by stretching the perineum by an increase in the normal expulsive powers, than by pulling the head through the undilated perineum with the forceps.

In mid-forceps operations associated with funnel pelvis, that is a narrowing of the outlet Williams now advises an additional pubiotomy if moderate traction upon the forceps will not effect a delivery. After a pubiotomy has been performed with the increase in all the diameters pituitrin would very likely effect a delivery as well and there would be less injury to the bladder and vaginal walls than is apt to be the case with forceps. In all other mid-forceps operations if very strong tractions are necessary an abnormal mechanism or a disproportion between the child's head and the mother's pelvis is at fault and the delivery is generally effected at the expense of the child and the integrity of the mother's soft parts.

Neurologists advise us that the brain is injured when the child's head is allowed to remain in the pelvis too long in the second stage. However, if forceps delivery is resorted to they point to many cases of impaired mentality and epilepsy directly traceable to such a history at the birth of the individual.

Elective Cesarean section on the other hand in proper surroundings, which can be easily secured at the present day has a very low mortality as follows even the ordinary forceps operation.

It may be claimed that such statements may lead to the indiscriminate use of pituitrin by the inexperienced. Even at that the pregnant woman will be in no greater danger than with the obstetrical forceps in such inexperienced hands.

INDICATIONS FOR AND LIMITATIONS OF TURBINECTOMY.*

By CHARLES W. REYNOLDS, Covington.

On picking up my society folder for the year 1915, I was surprised to see my subject set down for this first Thursday of January, instead of a later date, which I had anticipated, which later time would have given me ample time to present the subject of the "Indications for and the Limitations of Turbinectomy," in a more comprehensive form and with a more entertaining dress than is possible for an article slapped together in less than a week's time. Whatever may be the short comings, therefore we shall have to put the tight shoe on the foot of our esteemed program committee, who out of extreme modesty have not assigned to themselves any subject,

where they are the ones to be picked, but rather are the pickers. Every dog has his day, and so when I get on the Program Committee, which I hope may never occur, I shall have my inning.

With this introductory poke, I shall take up the theme assigned to the program for this evening.

In order to properly understand the whys and wherefores for such indications and limitations as may be presented, it will be necessary to delve into the anatomy of the nose at least as far as the turbinates are concerned. These turbinate bodies are usually three in number, the so-called superior, middle and inferior turbinates; a fourth one sometimes occurs, when the superior is split horizontally, constituting a "concha santoriniana." Douglas of New York City states that the term superior turbinate is not proper, it should be the ethmoidal crest or turbinate, and when divided horizontally, it should be termed the superior and inferior ethmoidal crest or turbinate. The essayist deems that a better division would be the classing of the inferior turbinate bone as the turbinate body, while the so-called superior and middle turbinates should be termed the superior and inferior ethmoidal crests or turbinates, since both form the septal side of the lateral mass of the ethmoid, at their bases. With this classification, when the superior ethmoidal crest is split horizontally, the lower part could then be termed the middle ethmoidal crest or turbinate. Therefore in this paper the turbinate body will represent the inferior turbinate under the usual classification, while the so-called superior and middle turbinates will be classed under the ethmoidal crests or turbinates.

This classing of the turbinates will serve to distinguish them in an anatomical sense, for this is a matter of great importance to bear in mind, when we have an operative procedure to consider.

These scroll-like bones serve to support the various blood vessels to and from the structures covering them in the normal condition and when normal have certain definite physiological functions, which are more or less changed by pathological conditions. Nerves and lymphatics also enter into the importance of their consideration.

The mucous membrane covering these turbinates varies with the turbinate covered and with the function of that particular part of the nose.

In the olfactory region, comprising the upper part of the nose, its roof, the superior and upper third of the inferior ethmoidal crest and the corresponding part of the septum, the mucous membrane is pinkish-yellow.

*Read before the Campbell-Kenton County Medical Society.

In the respiratory region it is a light pink, while on the posterior ends of the ethmoidal crests and the turbinate body it becomes whitish.

This variation in color is due to the varying vascularity of the different structures and is subject to change due to the increasing hyperemia or the presence of the reverse.

The mucous membrane of the nose is structurally composed of an upper layer of epiblastic and hypoblastic origin; a middle layer or basement membrane; and a submucous membrane, varying in thickness and containing the white fibrous and elastic elements, at the same time supporting the vascular, lymphatic nerve and glandular structures. In the olfactory region, the mucous membrane is thin, comparatively non-vascular, closely adherent to the periosteum, while its epithelial elements are of the columnar type and are not ciliated, lying among which are to be found the olfactory cells of Schultze.

In the respiratory region are to be found the ciliated epithelium, among which are scattered numerous goblet cells, as well as other cells.

The glandular structures are both mucous and serous and open upon the free surface of the membrane and are most numerous at the back and middle of the nasal cavity.

Large cavernous sinuses, forming erectile tissue are to be found in the sub-mucosa of the turbinate body and the inferior ethmoidal crest or turbinate, following the terms laid down in this paper. When these are congested, the nares are pretty well filled up.

The blood supply is very complex, the anastomosis being with a twig of the small meningeal artery, branch of the internal maxillary, branches from the ophthalmic, etc.

The nerves which most concern us are the olfactory, distributed to the septum, upper part, and to the superior and upper part of the inferior ethmoidal crest or turbinate, while the turbinate body is supplied from the sympathetic, which also supplies the previously mentioned crests, the fifth pair supplies general sensation while filaments from the anterior dental branch of the superior maxillary nerve are distributed to the inferior meatus and the turbinate body.

The functions of the ethmoidal crests and the turbinate bodies vary; they are concerned in olfaction, respiration and phonation, principally, three very important functions indeed, which vary according to the disturbances that may act on the structures entering into their functioning.

If the respiratory functions of the nose are normal, the chances are that the olfactory and phonetic properties are also normal. The external air, in order to be rendered non-irritat-

ing for the delicate structures over which it may have to pass, must be warmed, moistened and more or less freed from its suspended impurities. This is brought about by its being drawn over a warm surface, mixed with the moist vapors exhaled from the lungs and also an admixture with the glandular secretions of the nares.

Whatever foreign bodies escape the vibrissae or short, moderately stiff hairs projecting from the anterior portion of the vestibule, are caught in the vapor and precipitated into the mucous and gradually expelled from the nostril by the ciliated epithelium.

Minute particles emanating from odoriferous substances are drawn in during inspiration and are lodged in the secretion, there becoming dissolved and coming then into contact with the olfactory cells of Schultze.

It is very seldom to find a normal respiratory function of the nose when the upper structures of the nose are diseased, their irritating secretions setting up pathological conditions in the structures over which they may flow.

In addition to the previously mentioned functions there may be mentioned the part played in audition, taste and the protection afforded by attracting attention to poisonous and irritative vapors.

Psychologically, the relation of an odor perception to the memory, a familiar odor often calling to mind, scenes and circumstances long since forgotten, apparently.

What has thusly been sketched will portray some of the importance of the turbinate crests and body, when performing their normal functions. Let disease step in and the victim realize then what he failed previously to appreciate, what a comfort a normal nose is to its possessor.

Disease of the ethmoid crests and turbinate bodies will result in either too free or else too deficient secretion, offensive odors, mental or else real, obstruction to the breathing, or else too free breathing space, pain referred either directly to the nose, or else to the surrounding structures, as the supra-orbital cavities, antrum of Highmore, neuralgias of the several types, defective hearing, mouth breathing and all its attendant evils, functional derangements of distal organs as dysmenorrhoeic types, etc.

Febrile disturbances may result from pent up pus or secretions, or else absorption of septic products from the diseased tracts. Meningeal complications may result, ending in death. A thing of beauty and a joy forever to its possessor may become a curse, dragging that unfortunate possessor below the surface of life's tempestuous seas.

It therefore behooves the nasal specialist, as well as the general practitioner, to weigh well the evils of the conditions calling for turbinectomy and see that none go away dissatisfied, their condition worse than before consulting for relief.

This will call for a careful consideration of each case—a careful exploration of the parts, so as to make plain, just what is needed to bring about the necessary relief.

We must ever bear in mind the normal condition of the nose and its normal functions and relations. If by operative procedures or other means we can approximate that state, we can well be satisfied with our technical skill; if we upset the happy object of our goal, we may do irreparable damage, which will not be a shining jewel in our crown of a life's work.

The amount of the nasal obstruction, the nature of the disease, the character of the discharge, whether from the structures lying in the nose or coming from adjacent structures, the irritative nature of the condition and the effect on the general condition of the patient must be taken into consideration in mapping out the plan of campaign.

We should ever keep in mind, "do what is necessary and then stop." Too much tissue destroyed by operative or other means may make the condition worse than it was; too little may not improve matters very much, still, it will give an opportunity, at a later date to complete the treatment.

The amount of tissue necessary for removal, will first of all depend upon the extent of the diseased condition, its nature, its location in the nose, some parts of the nose being normally less patent than others. We should keep in mind, this normal patency, endeavoring to approximate it in our efforts at relief.

With this general discussion of the matter, the conditions leading to operative interference, where non-operative measures fail to give relief, will now be mentioned.

Hypertrophic rhinitis, by either being obstructive to breathing, or else obstructing by pressure, directly or indirectly applied, at the orifices of one or more of the openings to the sinuses, or at the internal opening to the Eustachian tube, or such hypertrophic change may result in interfering with the floor drainage of the nose; also when pressing upon the septum, it may result in septal deviation.

Cystic turbinate, usually the inferior ethmoidal crest or turbinate.

Lupus of the turbinate body, the mucous membrane being frequently affected, although the bone was attacked in very few cases, as reported by Mygind Year Book, page 261.

Sarcoma was found in a case of J. G. Con-

nal, originating from the posterior end of the turbinate body.

Polypi may spring from almost any part of the nasal cavity, its common site being the inferior ethmoid crest or turbinate, the middle turbinate of the usual classification. These usually originate among the ethmoid cells and by pressure absorption appear in the nasal cavities.

The essayist has had several myxomatous-like tumors, resembling greatly the paw of a mole, which arose from the anterior end of the turbinate body. They were in all probability of the myxo-fibroma type.

In addition to the conditions already mentioned, the inferior ethmoid crest or the superior may have to be removed so as to allow of proper drainage of the accessory sinuses—the cavities being thus exposed to the establishment of the proper drainage. The anterior end of the inferior ethmoid turbinate may have to be removed for proper drainage of the supra-orbital or frontal sinus, for a persistently red and inflamed condition, when other parts of the nasal cavity may appear normal, as is sometimes seen in caries of the bone; it may also have to be removed in order to ascertain the source of a purulent or mucopurulent discharge, whose source is in doubt. Removal may be necessitated, when there is a slight septal deflection, which presses on the turbinate structure, giving rise to inconvenience, although plenty of room exists below for the passage of air. Usually the septal operation is preferred.

Although plenty of air may pass through the breathing space, a sense of obstruction may exist due to the inferior ethmoid crest occluding the upper air passage.

Atrophic rhinitis affecting the lower portion of the nose with an enlarged and inflamed inferior ethmoid crest.

Oedematous polypoid hypertrophy of the turbinate bodies may occur even when partly removed, plaguing the victim, until their growth is checked by the proper treatment, which will serve to keep down the active congestion of the part.

Casselberry (Y. B. 1908, p. 238) in addition to the various indications already incorporated in this article advises its use to promote drainage and cleansing in certain types of atrophic rhinitis, especially where the ethmoidal sinus has been involved, the discharge adhering to the turbinate bodies; to relieve oedematous turgescence and to provide access for the radical treatment of non-suppurative ethmoiditis and nasal polypi. It is also indicated to improve nasal ventilation and respiration, as well as to relieve hyperesthesia and to diminish certain reflexes, as sneezing, asthmatic stimuli, etc. These conditions may

call for the removal, in part, of the inferior ethmoid turbinate.

Operative procedures, according to the divisions set forth in this paper, will naturally group themselves into two divisions, those involving the structures intimately connected with the ethmoid crests and the cells therein contained, and those involving the turbinate bone, which is a bone individually distinct from other bones.

Those involving the ethmoid crests or turbinates, naturally may involve the ethmoidal cells and sinus, secondarily, with their resulting dangers from local inflammation as well as the risk of spreading to the brain above, through the lymph spaces and the anastomosing arterial twigs which are sent down from the meningeal vessels, both arterial and venous. Those involving the turbinate bodies, or the usually termed inferior turbinate, are not subject to such risks.

While thorough asepsis, as far as possible, should be maintained in operations on the nose, it is imperative that this be done whenever the ethmoid crests are the site of operative procedures.

These risks are diminished, if care be taken to not delve around in parts where we can not see and to allow of good free drainage to the parts operated on.

Here it should be emphasized, that while most turbinectomies are done in our offices, still we are playing with dynamite. All turbinectomies are properly hospital cases and should be there attended to at least during the first twenty-four hours, if not thirty-six hours. By this method, the patient not being allowed to walk, most of the tamponading, otherwise necessary, can be eliminated.

Tamponing to prevent hemorrhage, necessarily interferes with the drainage of the sinus, whose orifice may be pressed upon in the effort to control hemorrhage. It can be readily perceived what a beautiful culture medium is to be found in retained secretions, that are the least bit contaminated, and we know that there are very few sterile noses.

A free vent to the discharges, as well as the absence of the tampon, certainly improves our patient's chances, let alone his greater comfort.

It is by reason of the uncertain results that were to be obtained by the use of the cautery, that it has to a certain extent fallen into disuse. The uncertain amount of tissue destruction by the cautery, the burns always being deeper, than the superficial appearance would indicate, has given away to the more certain results arising from operative procedures. We can regulate the amount of tissue removal by a careful manipulation of our instruments, which certainly means much to our patient's future condition.

In this connection, it will not be amiss to mention the dangers attendant upon septic thrombi, which are more apt to occur in cautery cases.

As to the methods of operative procedure, their number are, it would seem, legion. The knife, the snare, and the saw, all have their advocates, and the operator can have his choice. As all roads formerly led to Rome, so all the methods proposed are intended to lead us to the goal of relief for the patient. Whatever means will best serve the interests of the case, should be utilized. Remember to remove all that is necessary and not one bit more, and then give the case the necessary subsequent treatment until the wounds are nicely smoothed over.

The usual routine of preparatory treatment varies with the fancy of the operator, the first essential being a thorough cleansing of the parts. Then cocaine with a 4, 5, or 10 per cent. solution, to which a small quantity of diluted adrenalin solution has been added, the same being applied on small pledgets of cotton, or larger, according to the fancy of the operator.

Allow these to remain a sufficient length of time, so as to insure a thorough anesthetization of the part to be operated on. Remove and then operate.

The causative agent will determine the limitation of the operation to be performed, sanity in operating will largely determine the amount of danger to which the patient is exposed. Blaze the trail, but be sure that you do not throw a boomerang, which will play havoc with the delicate structure, before it comes home to roost at your door.

I will not burden you with a series of operations, further than to state that of course malignant growths or caries of the turbinates require their total ablation, especially in the malignant cases, and a removal of the diseased bone, leaving the healthy parts so as to approximate as closely as possible the normal relations.

It will be found very convenient in removing the posterior end of the various turbinate bodies, to follow out a suggestion, which I have used, that is the insertion of a hook in it, and if a snare is to be used, passing the loop of the snare over its handle and then on to the site of the operation, this simple little wrinkle serving to hold the fish when it is caught.

Now that the subject has been gone over, however incompletely, it may be handled, the purpose has been to caution you against too reckless removal of tissue.

Formerly turbinectomies were almost as common as oophorectomies, nothing was quite so easy as to operate, clean up things in a

short time, receive a check from a grateful patient, who would remark. "Doctor, how fine it feels to be able to take whole oceans of fresh air down into my lungs," pass out of your knowledge for some time while you patted your pocketbook awaiting a day of reckoning.

Did I say a day of reckoning? Yes for it surely came when the patient returned with a of too much tissue the air passed through the train of symptoms ensuing from the removal nose not properly warmed moistened nor cleansed resulting in alterations of the voice, dry throat, irritated lungs, often a cough from improperly prepared air. In place of normal sized nares, two tunnels were apparent, large enough to drive a horse through, extravagantly speaking. The reason was that proper consideration was not given to the fact that many cases of congestion are due to systemic conditions and subside on being properly treated, and also that general scar tissue was not properly considered. The contractile nature of scar tissue must be reckoned with in nasal cases.

These two factors are the main causes for the upsetting of the skillful operating of the rhinologist. A careful operator, especially after he has cut his eye tooth on the saw of experience, will take this into consideration and govern his removal process accordingly.

In closing this paper it is to be hoped that in the matter of the indications for and the limitations of turbinectomy, the foresight of the unfortunate possibilities of improper or too free operative interference may save the patient the hind sight of bitter experience.

This matter is to be carefully pondered over, especially since turbinectomy is being advocated for tubercular cases, so as to give these unfortunates more air. Properly limited turbinectomy is unquestionably indicated in some cases—those properly falling within its sphere, but caution is necessary in its application, lest we dig the pit of misery, still deeper.

Enuresis.—A study by A. B. Schwartz (Boston Medical and Surgical Journal, 1914) of 226 cases of enuresis, 128 males, 98 females, 3 diurnal, 134 nocturnal, and 89 both diurnal and nocturnal, leads to the conclusion that the cause of enuresis in children is not the same in every instance. In some the nervous element undoubtedly plays a part, and in others faulty habits. Local irritation from any source is a predisposing cause. Excessive fluids result in greater secretion of urine, while too little fluid results in a concentrated urine, which, whether it contains crystals or not, may irritate the base of the bladder and cause the desire for frequent micturition. Enlarged tonsils and adenoids apparently have no connection with enuresis.

SCOPOLAMINE AS A GENERAL ANESTHETIC IN SURGERY.*

By J. O. JENKINS, Newport.

The fear of death during anesthesia or of pain and suffering accompanying or following surgical procedures deter many patients from undergoing timely operation. They delay and procrastinate until life is placed in serious jeopardy from accumulated pathological combinations. When their confidence has been restored by the strong assurance of the physician, that the anesthetic has been robbed of its unpleasantness and dangers, they are correspondingly inclined to accept his decision, and to permit him to exercise his skill in their behalf. It is to dispel the patient's apprehension, as well as to safeguard him from danger, that the surgeon will seek some method which will require but a small and safe quantity of the ordinary inhalants, and yet render the patient unconscious enough not to feel the knife.

Certain drugs are notable for their analgesic effect on organized tissue and the inhibition of sensory impulse, and nature has been profuse in the number of plants containing substances which both anesthetize the gross tissue, obtund nerve impulse and suppress or entirely suspend the action of the brain cells as to perceptions of pain.

The solanaceae are best known in this respect and contain substances capable of crystallization variously recognized as duboisia, atropia, hyoscyamin, scopolamine, etc., and are narcotic poisons. They are mydriatic, sedative, soporific and anesthetic to tissue, the first effect being to stimulate the vasomotor system and afterward to paralyze it. In their action on the brain cells, there is produced a forgetfulness of events which may last from a few hours to days or weeks, or, patients with an idiosyncrasy to the drug, may never completely regain their normal faculty of remembrance. The mirror of memory is hopelessly shattered.

The chemical composition of the alkaloids derived from various members of the solanaceae are very similar and may be represented by that of scopolamine ($C_{17}H_{21}NO_4$), and the physiological effects are much alike though a stronger selective action on certain parts or systems of the body is noticed. They are all paralyzers of involuntary muscle and the lethal results of overdose are the same, however, as will be noticed clinically, atropia is the stronger and more lasting mydriatic; hyoscyamine the most soporific and intestinal analgesic, and scopolamine which is an obtunder of voluntary muscle and is also an an-

*Read before the Campbell-Kenton County Medical Society.

esthetic, a pronounced soporific and prolongs the period of forgetfulness. It is on this account that the latter alkaloid was formerly extensively used as a surgical anesthetic, supplementing its use by a very small amount of chloroform. Objectionable features developed as experience with it became greater and it is now seldom used.

The object in using an alkaloidal anesthetic is to obtund the afferent sensory nerves that the brain cells shall not recognize—that they shall forget—any injury as being painful. The psychic strain is also relieved and, it would appear, that the subconscious mind is almost entirely submerged. Fear is minimized, and the body and mind passes into a condition of extreme tranquility, yet leaving the volition capable of being exercised on suggestion. Thus a patient under the influence of scopolamine may be aroused, conversed with, perform required movements and immediately relapse to profound sleep without recognizing definitely what procedure is in progress, neither will he have experienced pain or remember the events for some time afterward; he acts much as if he was under a hypnotic influence. This peculiarity is sometimes of great advantage to the surgeon, because he can occasionally be guided by the patient's statements.

It is not always, however, that such a desirable tranquility can be secured. A certain number of patients develop the unpleasant features of toxic poisoning when too late to recall the drug. A state of mental excitement ensues which makes the patient uncontrollable unless he is brought under a largely increased chloroform anesthesia. Again, after the effects of the drug have disappeared, it may be found that a degree of more or less pronounced mental obliquity has fastened itself upon the brain cells leaving them permanently weak, confused and inefficient. Rarely, a patient in whom an undeveloped predisposition exists, passes into the field of pronounced insanity. Perhaps, a wide clinical experience, permitting a careful selection of cases and a perfected technique might overcome many of the objections to the use of the drug for the purpose of a general anesthetic, and a very desirable method come into more extensive use.

Three operative cases constitute the writer's experience with scopolamine as a general anesthetic, from one half to one dram of chloroform being administered in each instance.

The method of procedure was as follows: one one-hundredth of a grain of scopolamine was combined with one-fourth grain of morphine sulphate in one dram plain, sterile water. One-third of the above solution was injected hypodermatically, one hour before

the hour set for the operation. The second third of the solution was injected one-half hour before the hour of operation, and the remaining one-third, was given just previous to leaving for the operating room. As determined by observation, the effects were: The first dose tranquilized the patient, the second produced a drowsiness ending in light sleep, the third dose produced complete sleep and anesthesia. The general effect was, that the patient could be quite easily aroused; would obey commands; declared nothing hurt him, and would go to sleep again—especially if commanded to, "now lie down and go to sleep." In two cases there were no appreciable evidences of pain, and in one, a prostatic operation, there was, probably, some degree of pain.

Case 1. F. H., male, age 18, tuberculous right knee joint, drained under ether anesthesia July 18, 1905. Tuberculous infection followed, making it necessary to amputate the leg at the middle of the femur. September 8, 1905. Scopolamine-morphine anesthesia combined with 1 dram chloroform as above outlined. While the operation was in progress, the patient was aroused, looked at the site of operation, and said: "What are you fellows doing?" Said he felt no pain; was told to "lie down and go to sleep," and did so. Thirty-six hours elapsed after the amputation without any pain. The first dressing was made at about the end of thirty six hours on account of persistent oozing of blood, and at this time, the patient looked down at the stump, laughed in surprise and said, "I'll be doggoned, you've cut my leg off." There was no pain; this happy state did not continue many days, however.

Case 2. H. W., male, age 73, machinist. Tuberculosis of prostate and abscess. Vesicula seminalis found infected and nodular, and were both removed. Incision through perineum and drainage. Troublesome oozing of blood during and following operation. Scopolamine-morphine anesthesia. Patient restless and resisting until chloroform was increased. Slept about forty-eight hours after being returned to bed. Was mentally confused on awakening, had illusions and delusions; sometimes a depressive, and at other times a highly excited psychic condition. The mental status slowly improved, but was not fully restored at the time of his death some months later. A peculiarity of this case is, that he was father of eight children all of whom, shew stigma of substand origin. There are four girls in the family, two of whom have a mild form of insanity; one of them, a quiescent paranoiac, and the other a partially recovered delusional mania following childbirth. The two remaining approach

the normal. Of the boys, one died age 42 years of carcinoma of the pylorus and the other two are subject to neurasthenic depression and mild attacks of hysteria. These facts may indicate, that the scopolamine brought to the surface a latent insanity.

Case 3. Female, age 26, unmarried, stenographer. Very bright intellectually, though inclined to take a pessimistic view of life. Operation October 15, 1905, laparotomy for multiple fibroid of uterus and oophorectomy for diseased conditions. Scopolamine-morphine-chloroform anesthesia. It was noticed that the rectus abdominis remained tense and rigid during the operation. There was more hemorrhage than usual from cut surfaces and oozing continued notwithstanding the applications of hot wet packs. Recovery from the anesthetic was prompt and complete with but slight mental disturbance or vomiting.

It was desired to abandon the use of scopolamine because: First, it seemed to encourage a freer flow of blood from the raw surfaces; second, non-relaxation of muscular bundles; third, of the possibility of damage to the brain and intellect. Possibly at this day some of these objections might be overcome by other drugs or chemicals which would act as safeguards. Thus adrenaline might overcome the tendency for the tissues to ooze blood and some sedative be found which would protect the brain action and rigidity of muscle. If this desirable end shall be attained, we then will have an anesthetic which is very pleasant, safe and simple, but until this happens the use of scopolamine as a general anesthetic is not entirely devoid of grave dangers.

Gastropyloroduodenostomy.—V. A. Lapenta, Indianapolis (Journal A. M. A., July 10, 1915), reports a case of perforating pyloric ulcer in which the attack occurred very suddenly, without prior symptoms, in a healthy man after a hearty meal. The perforation was found exactly in the pyloric ring and in its lower outer portion. Lapenta was surprised to find on examining the ileocecal junction a clean cut perforation with a little fecalith just extruding from it. The pyloric ulcer perforation was treated according to the technic of Vidal by a gastropyloroduodenostomy, and the appendix removed in the usual way, the abdomen being closed, with drainage at the lower angle of the incision. The case seems to him to emphasize the etiologic role played by an appendix lesion in gastric and duodenal ulcers. He has been impressed by the frequency of pathologic conditions of the appendix in cases of acute, gastric and duodenal ulceration, and their relative rarity in the chronic form.

TWILIGHT SLEEP.*

By A. E. THRELKELD, Wheatley.

There is nothing new, nothing wonderful or occult, nothing mysterious about this method. Divested of its paraphernalia it is simply an obstetric procedure with the patient in a deeply narcotized and partially delirious condition.

This is a subject that all general practitioners should be glad to investigate and be fully informed upon; for it would be a great pleasure to all reputable physicians to adopt and practice any method to lessen the agony of childbirth, provided it could be accomplished without material detriment to the welfare of mother or babe.

"Twilight Sleep" is not the final solution of ease and comfort in labor, but may be the stepping stone toward the goal that shall remove the horror and agony from motherhood.

Chloroform and ether are applicable only in a certain per cent of cases. These anesthetics have gained but small favor abroad, and the great demand for relief in such cases has come from the women abroad.

In an attempt to accede to a certain extent to this demand the virtues of twilight sleep were tried.

Nowhere but in uncensored America could an energetic lay press make such unwarranted use of "half ripe" information as has been done these last few months with reference to scopolamin, narcophin and "twilight sleep."

One of our large daily papers a few weeks ago, published the picture of a well-known woman and devoting a full column on first page, saying she was the first of the "400" upon whom the twilight sleep had been used; yet the final paragraph to the article informed one that up to time of going to press it had not been used. Inquiry at the hospital develops the fact that it was not used in her case at all. Another evidence of the unreliability and unscrupulous nature of what is sometimes called "news."

Another article credits a doctor who says she used "twilight sleep" in all her confinements with saying, "the babies are *brighter* for having been born under the influence of morphine and scopolamin. In such style and manner do we read of "twilight sleep" in our daily and weekly papers and in some of our leading magazines.

This extensive airing by the lay press has a tendency to produce a demand by prospective mothers that they be accorded this placid, unconscious and painless termination to pregnancy, so fulsomely narrated.

They are demanding of us why they may not receive these benefits and ask why the

*Read before the Owen County Medical Society.

country physician is not up to date in this class of cases. We should be informed on the subject and be able to give them a satisfactory answer to such questions, according to the light of true scientific research. If we can not conscientiously give them the benefit of "twilight sleep" treatment we should be able to give them satisfactory reasons why we can not do so.

The old H. M. C. tablet (hyosine, morphine and caetin) out of which has grown the scopolamin-morphin combination, was first used in this country about twelve years ago. After careful observation by our leading obstetricians it was abandoned in both their clinical and private practice because of its deleterious effects, especially upon the newborn; a number of babes being fatally narcotized at birth.

So long as the placenta remained attached after birth the children could be induced to breathe, although the heart and respiratory acts were slower than normal. As soon as areation from the mother was interrupted (placenta detached) asphyxiation became established; prolonged efforts at resuscitation proving ineffective in a certain per cent. of cases. This, together with the other well recognized effect of the drugs (scopolamin and morphine) slowing up and prolonging labor, and predisposing to serious sequelae, are the particular factors that have led the profession to look with askance upon "twilight sleep" and the reports that have come from certain sources, and to hesitate in making use of the drugs, until further experimentation develops a safer rule for governing their use and method of administration.

Novocain, chloral hydrate, gelsemin canlrophyllum, lobelia, nitrous oxid gas have all been tried and found wanting. Nerve blocking and spinal anaesthesia have been tried and abandoned.

Scopolamin and morphin or morphine are dangerous remedies in obstetrics and when used require experience and proper faculties for their administration. It is a special form of anaesthetic and the patient should be given the attention of a special anaesthetist, just as one would do in any surgical case, where consciousness of the patient is to be held in abeyance.

Under such circumstances, i.e., a special trained assistant to assume responsibility and administer the drugs, and in a hospital with all necessary accoutrements, "twilight sleep" may be used in selected cases to advantage. Even then through the idiosyncrasy of certain patients failure will occur, and an occasional patient or the baby will be lost.

The criticism from more conservative minds in medicine is just and timely, for many prac-

tioners will allow themselves to be forced into the use of "twilight sleep" through jealousy and fear of losing their patients. The method will undoubtedly be well tried and some form of near painless labor will come out of it, but until the certainty of its administration has been determined, let us hold safety the first principle in our armamentarium.

THE LAW OF HEREDITY.*

By MAURICE BELL, JR., Eminence.

One of the most familiar facts in Nature is that like produces like. Human beings produce human beings, and nothing else produces them or can be produced by them. This fact establishes the law of heredity. In its stricter sense the law means the transmission of special qualities. In this application it does not mean alone that black parents will produce black children, or white parents white children. It means in the more restricted sense, that special qualities in the parents will be represented in the children. by the tendencies to the development of those qualities. It is very difficult to draw the line between broad and restricted tendencies thus transmissible and transmitted.

But the fact that broad characteristics, both physical and mental, are transmitted to our knowledge creates the presumption that a child will be born with a tendency to develop any strength or weakness that one or both its parents possess.

This tendency appears in the most unexpected and curious forms. Thus, one, two or more generations may be skipped, when a child will be born with a characteristic handed down to it, has existed but lain dormant in its parents or other intervening progenitors.

Again, a child may be born with a characteristic that was really foreign to the blood of its ancestors, but was instilled in it by their occupation. For illustration, it was discovered in the case of Jesse Pomeroy, the boy murderer, that although his parents were excellent people, his father was a butcher and his mother was in the habit of visiting the shambles for several months before the child was born. Neither parent had ever developed a homicidal tendency, and yet they were so injured to the taking of lower lives and the shedding of blood that it is conceivable that this habit was transmitted in the child into a homicidal tendency.

It is certainly a fact that an ailing, peevish mother will produce a child of a similar disposition, we may expect nothing else.

A farmer in selecting plants from which to save seed for the next year's planting, never

*Read before the Henry County Medical Society.

makes the mistake of choosing indiscriminately, nor does he select the weakest on the theory that it makes no difference. He will select the finest, largest plants to furnish seed. It is by pursuing this method that improved varieties are constantly being brought out. Hence we are compelled to believe that the strongest parents will produce the strongest children.

Take the mothers of great men and they have been great women. The maternal influence is greater than the paternal. The reason for this is, the child is a part of the mother's body during the nine months of gestation, and as such part it receives the nourishment she chooses for herself, has the same blood in its veins that fill hers, and is subject to all the nervous conditions that effect her. After birth the physical relation is maintained to a slight degree in the fact that it receives its nourishment from the breast.

The mother is the natural and constant custodian of the child, and as imitation is an essential part of our nature, its character will be moulded in a large measure by hers. This being a fact that heredity plays a vital part in the character of the child, let us inquire what its manifestations may be. The first and most evident truth is that physical qualities are transmitted. Thus blond parents have fair children, as a rule, large parents have large children, or children who grow to be large.

Parents descended from a line of hard manual workers usually have well developed offspring. People who live natural, intelligent lives, are likely to be healthy, no matter what weakness they may have inherited, for the reason that Nature's efforts are always bent to correct errors.

A good deal of bad living is required to overcome this natural tendency, but most people live a great deal worse than they think. These remarks are deemed timely for the reason that if people come to rely too much on heredity they will rely too little on themselves. Some exhibit the weakness of assuming that as they are the product of their ancestors way of living, it is useless for them to try to be anything else.

And as our ancestors have handed down certain tendencies to us, and we realize those tendencies are bad, we are placed under the strongest obligation to live in a manner to overcome as much as possible.

It is evident that no matter from what point of view we regard this subject, living is an essential part of it.

While size is an element of no value in the ordinary struggles of life, strength is. By strength is meant not only good bone and muscle, but that deeper strength which is found in the ability to resist the evil influence

of conditions which militate against strength.

If one takes cold easily he is not strong. Men of apparently splendid physical development are seen to succumb under conditions which seemingly much weaker men resist.

Hence, by strength is meant vital energy. It is clear that abundance of vital energy is one of the most useful qualities it is possible for us to possess. By living right we can inculcate within ourselves the natural power to resist disease, and by cultivating ourselves, we can transmit the tendency to others. If we violate natural laws, knowing our acts to be violations, we transmit to our children a tendency to do likewise.

Abortion is the deliberate taking of human life and its practice leads to a disregard for the sacredness of life. A sound mind usually goes with a sound body, so it is essential we cultivate sound bodies if we desire to bear children with sound, competent minds.

There is still another phrase, that is the transmission of moral qualities. It must be evident to all thinking people that immoral habits of thought and conduct produce a like tendency in the offspring. It is much easier to go wrong if the body and mind are weakened by disease.

There are deformities of mind as well as body, and they are much more easily transmitted. If we try to do right, our children will inherit the tendency to strive for the same end.

Each one stands between two eternities, the past and the future. In each of us is implanted the natural tendency to be better than our ancestors. It is our duty to recognize this tendency, to cultivate it, to make the most of it. In ourselves in the short time allotted us, we can begin a tendency which will turn aside evil tendencies we have inherited, and in so doing we can begin a new line of good, stretching throughout the eternity before us. Our lives are not for a day, not for the few poor years allowed us, the influence of each goes forward forever.

Relief from Toothache Due to Acute Pulpitis.—

Raynal, in Gazette Medicale belge for May 7, 1914, is credited with the following formula to be used locally for toothache:

Chloroform	ziiss
Creosoti	ziiss
Tincturae opii	zzi
Tincturae benzoini	zzi
Misce.	

The tooth cavity should first be gently cleansed with a stream of tepid water from an appropriate syringe, and dried out. The analgesic preparation should then be dropped in or applied on a small ball of cotton. This should be held in by another of proper size to fill the cavity, impregnated with tincture of benzoin.

PLACENTA PREVIA CENTRALIS;
CESAREAN SECTION FOR
RELIEF.*

By W. O. HUMPHREY, Louisville.

In presenting this report this evening, my sole object is to stimulate an already awakened interest amongst us in the new therapy of this, one of the gravest but fortunately not so common, complication of gestation and parturition.

A perfectly satisfactory accounting for this abnormal implantation of the placenta over the internal os has not been determined, but clinical observation shows, that it occurs more frequently in multiparae than in primiparae, and that it is more common among the working classes.

That abdominal Cesarean section for the relief of placenta previa, is becoming more favorably and more frequently considered, can readily be seen in perusing any of the new text books of obstetrics or in any of the articles upon this subject, appearing in the journals.

Mrs. A. K., white, age 36. Married at 23. Eleven pregnancies. Eight living children. Family and personal history negative, save the three abortions. The first occurred March, 1911. The second December, 1912, for which no cause for either could be determined, and the last, at three and one-half months, October 24, 1913. This was caused by a placenta previa, as was found when delivering her and of which I told her and her husband at that time.

Menstruation returned November 28th, 1913, and did not recur again. During March she had a continuous lead of blood which she took for a prolonged menstruation, but for which she did not consult me, but informed me in April of it. July first I received a call to see her at once, but it was an hour or more before I could do so and I found she had had a severe hemorrhage, but that all flow of blood had ceased and an examination with speculum revealed no bleeding. I was told at this time that she had had some bloody discharge quite frequently. A threatened miscarriage was diagnosed, and the patient put to bed. No further symptoms occurred and after ten days she was allowed to get out of bed and the next day she took up her household chores. August 11th I was again hurriedly called on account of hemorrhage and again the bleeding had ceased before I arrived. Examination revealed no pathology whatsoever nor could the placenta be felt through her thin abdominal wall. The case was watched again until August 19th, and no

protest she got out of bed again to take up the duties of her home. The night of the twenty-second I was again called but this time on account of some abdominal discomfort. I was told that at 5 o'clock in the afternoon there was considerable hemorrhage, but that there had been none since. Again nothing could be discovered on examination. And the patient was given one-half grain of morphine and 1-150 grain of atropine hypodermically. I saw her the next morning and found the cervix patulous. On introducing the index finger the placenta could be felt. The abdomen was palpated and an oblique presentation with head on left side could be made out. Dr. Gossett was at once called in and the husband told that a Cesarean section was the safest procedure for the mother and the child. Patient was at once sent to the Jewish hospital. No discomfort was occasioned by the move to the hospital. And no vaginal discharge was noticed until seven o'clock that evening. Again at eight o'clock when the urine was voided there was some blood discharged. At 11:15 there was evidence of considerable bleeding and it was then decided to interfere, and orders were given for the patient to be taken to the operating room.

Assisted by Doctors Lee Kahn and E. E. Owen and Dr. E. L. Henderson as anaesthetist, an abdominal Cesarean section was performed and a five and three-quarter pound boy was delivered. There was severe hemorrhage from the placental site just as soon as the baby was lifted from the uterus but it was immediately stopped as soon as the placenta was detached and the site of the attachment heavily wiped with gauze. Five hundred c.c. of normal saline solution and twenty-five minims of pituitrin were introduced under the skin at this time.

By the time the closure was completed the patient's condition was very satisfactory, metrorrhoeism coming on after the first thirty-four hours and continuing for eighteen hours was the only unpleasant feature of convalescence. This was relieved best by pituitrin twenty-five minims hypodermically, and magnesium sulphate half ounce, glycerine two ounces, turpentine two drachms, in quart of hot water per rectum. Mother and baby were permitted to go home September 9th.

Hemorrhage, the only symptom, was very graphically portrayed in this case, beginning early in pregnancy, recurring in increasing intervals as pregnancy advanced.

If the abnormal situation of the placenta is detected during pregnancy, send your patient to a hospital and terminate gestation as soon as the symptoms demand.

*Read before the Jefferson County Medical Society.

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NEXT MEETING STATE ASSOCIATION,
HOPKINSVILLE, 1916

COUNTY SOCIETY REPORTS

Barren—The Barren County Medical Society met in Dr. Bott's office, Glasgow, August 18, 1915, with the following members present: Ferguson, Miller, Porter, Turner, Jordan, Biggers, Howard, Smock, Acton, Botts, and Taylor.

The society was called to order by Dr. Miller.

The reading of the minutes was deferred to next meeting.

There being no papers, reports of clinical cases were called for, when the following cases were reported, and kindly noted by Dr. Porter.

J. C. Jordan reported the following case: Young man, 19 years old, has had for some time, persistent elevation of temperature, with evening remission, and night sweats, the morning temperature being 103, pulse 60, headache, coated tongue, lassitude, no cough, and bowel action normal. He was operated on some time since for appendicitis, but about the scar there is dullness, some enlargement, and at times considerable pain. The case was discussed by Drs. Biggers, Howard, Turner, Botts and Miller, the belief prevailing that there is local trouble which should be looked after by the surgeon.

W. F. Biggers described a case of "Otitis Media" which has been under his care since December, 1914. The patient is a girl four years old, well nourished, and intelligent. Two or three times a week, she falls and remains unconscious for about ten minutes. Otherwise, her condition differs but little from the average child of her age. She has had the treatment commonly given in such cases, but the "spells" don't improve. He asked for suggestions as to treatment, and prognosis. Drs. Miller and Ferguson believe the case is one of regular Epilepsy, and as such we can hardly hope for any treatment to be successful.

S. J. Smock suggests that a successful treatment of the ear trouble might mitigate—possibly cure the condition.

T. F. Miller submitted for consideration a plan to organize an inter-county medical society composed of the members of the county societies of Barren, Metcalf and Hart counties, on plans hereafter to be devised. Motion carried, that we favor the movement, and that Dr. Howard be appointed to correspond with the Secretaries and others interested, making such arrangements as may seem proper, and report results at our September meeting.

After arranging a program for our next meeting, the society adjourned to meet in Glasgow, September 15, 1915.

J. MORGAN TAYLOR, Secretary.

Barren—The Barren County Medical Society met in the office of Dr. A. T. Botts, July 21, 1915, with the following members in attendance: Jor-

dan, Siddens, Turner, Ferguson, Acton, Miller, Botts, Britt, Smock, Porter, Howard, Taylor, Carroll, Palmore, and Depp. Dr. Henry Childress of Paducah, was a welcome visitor.

The meeting was called to order by President Ferguson.

The minutes of last meeting were read and approved.

In response to a call for clinical reports, a number of cases were reported and discussed. Nearly every member present participated in the discussion, and all felt that the time was well spent.

C. C. Turner, whose report I send under separate cover, described a very interesting case.

Motion carried that a committee be appointed to prepare resolutions expressive of the feeling and sentiment of the society on the death of Dr. Joseph Sherrell Leech, which sad event occurred July 10, 1915. C. C. Turner, A. T. Botts, and R. H. Porter compose said committee.

Following is the program for our next meeting:

E. L. Palmore, "Puerperal Eclampsia."

J. B. White: Report of Cases.

T. F. Miller: "Other Complications of Labor."

J. G. Siddons: Report of Cases.

Adjourned to meet in Glasgow, August 18, 1915.

J. MORGAN TAYLOR, Secretary.

Boyle—The August meeting of the Boyle County Medical Society was held at the Calvert Hotel, Perryville on August 17th, with the following members present: Geo. Cowan, J. R. Cowan, J. E. Caldwell, J. R. Steele, D. M. Godbey, W. H. Sparrow, T. R. Griffin and H. M. Pittman.

The application for membership of Vance Rawson and Will Humn, were reported favorably by the Board of Censors. Vance Rawson received the votes of all members present and was elected to membership.

The secretary was instructed to notify the applicants of the action of the society.

J. R. Cowan read a paper entitled, "The Differential Diagnosis of Fevers," which elicited much discussion and favorable comment, and was ordered printed in the State Journal.

The society adjourned to meet in Danville, September 14th, at the Elks Club.

T. R. GRIFFIN, Secretary.

Christian—The Christian County Medical Society met in regular session Tuesday, July 20th, in the Avalon, Hopkinsville, President Gates was in the chair and the following members present. Gates, Erkiletian, Lovan, Lacy, Keith, Williams, Wright, Lackey, Stites, F. M. Bassett, Caudle Harned, Watts, Bell, Stroube, Reynolds, Dade, Stites, Frank, Rice, Gaither and Sandbach.

After the reading of the minutes of the previous meeting the Secretary read an article from the

June 5th issue of the Journal of the A. M. A., on Tanlae. After quite a lengthy discussion a committee composed of Drs. Bell, Sandbach and Stites, was appointed, to act for the society in publishing extracts from this article in our two local newspapers.

A committee composed of Drs. Bassett, Sandbach and Keith was appointed to publish the movement of bringing the State meeting to Hopkinsville in 1916.

G. W. Lovan reported several cases of "Pellagra" with an enormous death rate.

B. A. Caudle presented a clinical case and the chair appointed Drs. Bell, Williams and Watts to make examination and diagnosis. Report: Woman, colored, age 25, three children, anaemic, no fever, pulse 95, tongue sore and coated, diarrhoea, vaginitis, eruption on hands and complains of weakness and pain in the abdomen. Diagnosis, pellagra.

J. G. Gaither read a paper on "Inguinal Hernia." Diagnosis very important. Operative interference lessens the mortality. Inguinal the most frequent of all hernias. Eighty-six per cent. of cases occur in the male and most often on the right side. The doctor had several large drawings illustrating his paper and method of operation.

H. W. Watts, in discussing the paper said: "I enjoyed the paper. The essayist has covered the grounds. Diagnosis most important from the general practitioner's standpoint. Hence look very carefully for the diagnosis."

F. H. Bassett: Why do you use this operation in preference to the Ferguson that does not bother the cord?

J. G. Gaither, (Closing): Necessary to bother the cord to reach the floor hence raise it from the force of the oncoming intestines.

S. E. Stroube read a paper on Pneumonia.

Said, "Will confine my paper to lobar pneumonia. Do not drug too much. Plenty of fresh air. Do not stimulate early. Bleeding does good in some cases. Never use the coal-tar products. Creosote vapors are of great value. Opium, bromides or chloral for restlessness and cough. Ice bag and counter irritation does good but never blister. Serum treatment has some good reports. Would like for this to be brought out in the discussion."

W. E. Reynolds, in discussion said he was much pleased with the paper. Often used blister. Now prefer the ice bag. Use digitiline.

J. Paul Keith: Thanks to Dr. Stroube. My efforts are not a perfect success. Often loose most favorable cases. Prefer warm comfortable room well ventilated.

J. G. Gaither: Do not believe in blisters. May use counter irritation. Pneumonia does not often kill negroes while tuberculosis kills at once. Very peculiar. Always look for pus after thirteen days.

Austin Bell: A splendid paper. I agree with Dr. Keith. As stimulants use ammonia in some form, whisky and camphor.

O. E. Wright: Get good results with strapping the sides where pain is severe.

W. S. Sandbach: Believe in plenty of fresh air but prefer it warm by all means. If counter irritation does good blistering will do more good. Do not blister as a routine but have in some cases with good results. A splendid paper.

No further business we adjourned to meet again the third Tuesday in August.

W. S. SANDBACH, Secretary.

Franklin—At a called meeting of the Franklin County Medical Society for the purpose of considering the application for membership in the society of Col L. M. Maus, Medical Department of the U. S. Army, retired, the following were present: Drs. L. T. Minish, Jno. Patterson, C. A. Fish, Warren Montfort, N. M. Barrett, G. H. Heilman, U. V. Williams, H. S. Keller, F. W. Mastin. On motion Dr Maus was unanimously elected. After which the meeting adjourned until the regular meeting, Tuesday, October 5th.

U. V. WILLIAMS, Secretary.

Floyd—The Floyd County Medical Society held its regular session at Allen, Friday, July 2, 1915.

Called to order by E. H. Maggard, President.

The subject of fees was discussed and a program for the next meeting arranged.

G. L. Howard is to read a paper on "Acute Intestinal Indigestion."

Members present: E. K. May, Allen; Edw. Stumbo, Allen; H. H. Mayo, Allen; T. T. Webb, Garrett; E. E. Archer, Auxier; G. L. Howard, Falmouth; E. H. Maggard, Wayland; Frank Ramey, East Point.

Adjourned to meet again August 13, 1915.

M. V. WICKER, Secretary.

Harrison—The Harrison County Medical Society met at the office of Drs. Givens, Wells & Moore, on August 2, 1915. Meeting was called to order by the President L. S. Givens, minutes of last meeting read and approved. Members present, Drs. W. H. Carr, N. W. Moore, Best, Martin, Rees, Wells, Smiser, Wood, McDowell, Givens, W. B. Moore and Havlon Carr.

W. H. Carr reported a number of cases of sore throat of unusual severity in his community. All the patients being adults.

W. B. Moore reported a case of appendicitis operated in first twenty-four hours. Appendix gangrenous, fecal fistula resulting.

These cases discussed by Drs. Wells, Martin, Rees.

The application for membership of Dr. Ross Gillespie, Earl and Havland Carr, referred to the Board of Censors.

L. S. Givens read a paper on "The Pupil in Health and Disease."

Paper discussed by Drs. W. H. Carr, Wells, Rees and closed by Dr. Givens.

Society adjourned to meet September 6, 1915.

W. B. MOORE, Secretary.

Muldraugh Hill—Meeting called to order at 10:30 A. M. in the City Hall by the President, H. R. Nusz, about thirty-five members being present.

The reading of the minutes of the previous meeting was dispensed with.

C. Z. Aud, Sr., made a statement that the chiro practics were doing operations and not conforming to the State law. That the Wine of Cardui people were among the people and physicians trying to secure witnesses for their suit against the Journal of the American Medical Association.

D. W. Gaddy spoke as to the frequency of doctors endorsing remedies that were and are detrimental to the regular profession.

T. E. Craig stated that it was important for physicians to have a fee list or schedule and delinquent list. No discussion.

B. M. Taylor read a paper entitled "Report of Interesting Cases." Discussion followed.

W. F. Boggess opened the discussion stating that the country physician must be versatile in the malarial case: believed that there was an additional infection. The doctor had looked to teeth, tonsils, and mouth; no infection. Suggested quinine in solution, arsenic and sodium caccodylate.

C. Z. Aud, Sr., advised search for further infection and study of malarial re-infection. Suggested open air and climate free from malarial infection.

W. R. Rogers suggested use of nitric acid drops five, three times daily, using the C. P. acid.

Louis Frank spoke of the gun-shot case and complimented him upon the excellent result obtained.

In the embolic case we often see frequently in the femoral vein which follows operative work, usually preceded by a mild infection. Has seen cases of fatal pulmonary embolism. Called attention to the need of an early arterio-venous anastomosis, citing one case in the literature that had had this operation performed in all four extremities. Prefer caccodylate of soda to quinine in malaria. Suggested the transfusion of blood followed by bone marrow extract.

Discussion was closed by Dr. Taylor.

A. O. Pfingst, of Louisville, read a paper under the caption of "Emergencies in Eye, Ear, Nose and Throat Practice."

W. F. Boggess complimented the usefulness of Dr. Pfingst's paper. Considers post nasal packing a severe operation; very painful. Do not stop nose bleed too suddenly, especially in old

people with high arterial tension. Considers emetin of value, although at the present time we are using same empirically. Reported a case relieved by emetin who was bleeding from the gums.

D. W. Gaddy spoke favorably of the plugging of nostrils posterior and anterior. Never be rough in methods. Has never failed to get results with pituitrin.

Curran Pope spoke of the painfulness of small metal bodies in the eye. The fear of foreign bodies in the nose usually had its basis in a psychology that dreaded the entrance of the foreign body into the larynx. In one case which he analyzed this was the basis. Had a wide experience in pyorrhea. Emetin in pyorrhea was a specific. Uses cleansing first, then swab with iodine and use fluid extract ipecac 25 to 50 per cent or full strength to gums. When recovered paint or some time with iodine.

F. P. Strickler complimented paper and agreed with the essayist.

Owen Carroll suggested to tell them you had found and removed bone.

C. Z. Aud, Sr., said fish bone feeling was largely psychic.

B. J. O'Connor said it was a great deal of trouble locating foreign bodies in the eye and recommended always finding a foreign body as this satisfied the patient

C. T. Riggs discussed the action of pituitrin as he had not heard Dr. Pfingst's paper.

B. M. Taylor had a number of cases of foreign body in the eye, especially pieces of steel.

A. O. Pfingst closed the discussion with thanks for the discussion that had been brought out.

W. F. Boggess then read a paper bearing the title, "Some Remarks on the Medical Treatment of Bright's Disease."

On motion it was agreed to read all papers first and then have a general discussion.

G. S. Haynes read a paper dealing with "Practical Points that Relate to Rectal Diseases."

J. R. Wathen read a paper upon "The Diagnosis and Treatment of Gastric and Duodenal Ulcers."

Curran Pope in the general discussion said that he believed there was less elimination than we were led to believe; that the heat produced better oxidation, drew the blood to the skin, lowering the blood pressure and allowing the kidney and bowel to eliminate by removing the blood from the splanchnic. If heart is weak apply ice bag to heart while treatment is being given. In drinking water it should consist of three phases eight hours apart. He agreed with the essayist that a liberal diet was necessary; too much rather than too little. In cases that were obese and flabby thyroid sometimes did well. Referred to the danger of starvation methods in ulcer and the need of a careful X-ray ex-

amination by mouth and per enema. The American method is by far the best.

N. R. Rogers recommended apocynum cannabinum for ascites.

A. O. Pfingst asked Dr. Hanes if he attributed his results to surgery or vaccines.

Louis Frank did not think much of the X-ray. Needed very great care and study of many plates. Bright's disease always interesting to surgeon because of operative danger. Pays little attention to albumen. There are an enormous number of interstitial cases. Believes in a study of the nitrogen content of the blood as the best measure for protection.

W. F. Boggess closed the discussion by replying to Dr. Frank, stating that we conserved and preserved the islets not affected. One man is more susceptible to kidney toxin than another. The patient becomes immune to toxin by becoming accustomed to poison. Enormous number of patients with albumen, hyalin and hyalo-granular casts.

G. S. Hanes answered Dr. Pfingst by saying that any man can make out an amoeba if it is moving but hard to see if non-mobile. Pruritis ani must be treated for a long time after operation by means of vaccine made from the germs contained in the tissue.

J. R. Wathen called attention to the growth of the study of gastric and duodenal ulcers. Advised Sippy's method as to use. Used to attach much importance to gastric analysis, less so now. Difficult to diagnose any condition.

On motion duly seconded and carried Dr. Gowdy's paper was passed until next meeting.

The society then adjourned.

CURRAN POPE,
Secretary pro tem.

Pendleton—The Pendleton County Medical Society met at the Day House in Falmouth, on Wednesday, August 11th, 1915, with the following members present: Beckwith, Blakerby, Brown, Chipman, Clark, Cram, Ellis, Kendall, McKenney, Nicholas, John E. Wilson, Woolery, J. H. Caldwell and J. A. Caldwell from Newport, visiting.

After roll call and reading of minutes of the previous meeting, we proceeded to the business of the day.

After the usual report of clinical cases and a reading of a paper by Dr. J. A. Caldwell, we adjourned. No essayists were prepared, so we had to dispense with the ordinary program.

W. A. McKENNEY, Secretary.

Russell—The Russell County Medical Society held its regular public meeting at Old Pine Grove Church, near Sunshine, August 27th. Early in the morning it began to rain and the inclement weather made us think we would have a small crowd, but by 7:30 the lowering clouds cleared

away and by 10 o'clock the old church house was filled to overflowing and many could not gain entrance. The crowd was composed of men, women and school children, teachers, farmers, merchants. In fact, persons from most all walks of life were there to hear and take part in the public health meeting, which was a success from start to finish.

First was prayer and talk by Rev. Simon Perkins. Then songs by the choir. Welcome address by Prof. Ben. Edmond. Response by Supt. John M. Mitchell.

J. B. Tartar read an exhaustive paper on "The Prevention of Tuberculosis," which was listened to by the audience with great interest as this locality seems to be a focus for tuberculosis.

The paper was discussed by quite a number of the teachers present, and I could hear the laity discussing the paper at the noon hour.

Prof. John W. Mitchell, Uriah Mitchell, Ben Edmond, E. W. Edmond, D. C. Hopper and several others made talks on the paper and other matters relative to sanitation and schools and house. At noon E. W. Edmond announced "Dinner Time," so the ladies both old and young spread the dinner under the shade trees and in two large school buildings. There was enough elegant or nice food consisting of pork, beef, nutt-on, soup, potatoes, beans, tomatoes, cabbage, bacon, chicken, corn, bread, oysters, salmon, fish, cake, pudding, pies, fruits, custards in fact most everything that the most delicate appetite would want, to feed seven hundred people. The people of that section deserve credit and compliments. After eating, then picking teeth, chewing long green, smoking, laughing and talking, and the boys playing base ball and the smaller boys playing marbles, "7 up" the girls playing lawn tennis and others playing foot ball while others were coupled out talking over old times and some courting or "sparking" as I stood under a stately oak tree near by with my arms akimbo, I shifted my "quid of long green" from the left jaw to the right and it almost made me wish I could be back again awhile to the days of yore.

Called to order at 1 o'clock by Chairman Edmonds.

Several interesting papers were read on different subjects in regard to health and the general welfare.

J. B. Scholl read a paper on "Preventive Medicine." The paper was discussed by Drs. Tartar, Blair and others.

Now, in closing, will suggest that each medical society in Kentucky meet in each educational division in the county and have what is called a public health meeting and all you will have to do it to let the good people know what you want them to do and I will insure they will be ready to help in the good work of preventing disease.

Our President, L. D. Hammond, and I decided a year or more ago to keep these meetings up, so

we have and I know it has done more good than just the doctors meeting in the county seat or other towns. Get out in the country and rural districts and mix and talk with and to the laity and show them what we are striving to do. I feel sure that under the able and faithful service and management of our President, L. D. Hammond, our society has done more this and last year for preventing disease than ever before. Every doctor in Russell county being members, makes a faithful team.

At 3:30 P. M., the society adjourned to meet within the next moon in another public health meeting at some place, invited or suggested by the laity, or called by the President.

J. B. SCHOLL, Secretary.

Russell—The Russell County Medical Society met in regular session at the Holt Hotel, Jamestown, July 31, 1915, with President L. D. Hammond in the chair. Prayer was offered by Judge J. H. Stone. J. H. Combest was re-elected to membership. This only leaves one non-member in Russell county who is a retired physician.

The roll was called and the following answered present: L. D. Hammond, J. S. Rowe, J. I. McClernndon, J. B. Tartar, J. D. Combest, J. B. Scholl.

J. B. Tartar read a paper on Tuberculosis.

J. B. Scholl read a paper on "How the Doctors and Laity Should Treat Each Other."

J. D. Combest, Rowe, Hammond and McClernndon discussed the paper.

The interesting clinic material presented by L. D. Hammond kept the society busy until well into the afternoon session, consequently had to continue Dr. Hammond's elaborate essay on "Puerper Infection" until the next meeting. If the clinic still continues to increase the society will have to devote the entire day to the clinic and hold a two day's session, the second day devoted to the reading of essays. Am glad that the very best people are taking advantage of the free clinic. They seem to just now begin to know or find out the benefit our society is and has been offering the sick for twenty-three years or more, so my judgment is that if all the doctors would furnish clinical material it would be as much or more beneficial to the society and laity than too many essays. Our assembly hall the parlors of the Holt Hotel, was fairly well filled, most of the time, with the laity seemingly interested with good attention and behaviour. The hall with the clinical material abundant, made me think of the clinic at the old university in our younger days. So upon the whole I will say that our society is progressing in every respect.

On motion and second, it was carried to give the President, Dr. Hammond, power to appoint a physician to visit the public schools in Russell county during the first part of August and make a talk on "Prevention of Disease," all the doc-

tors present sanctioned the resolution and offered his service to any district or precinct the President directed. The following was the assignments made.

Creelsboro and Rowena precinct, J. S. Rowe; West Jamestown and Rowe's Cross Roads, W. G. Flanagan; Wolf Creek, J. B. Scholl; East Jamestown, J. B. Tartar; Russell Springs, J. D. Combest; Webb's Cross Roads, L. D. Hammond.

The doctors are supposed to begin at once and visit every school as indicated above.

Upon inquiry of the society report of only one case of typhoid in the county, no measles, no pertussis, no scarlet fever, no small-pox, no mumps; in fact none of the contagious diseases and but very little sickness of any kind. However, the dread tuberculosis still stays in our county. In fact it has killed more people so far as I can learn than all else. The society is and has been doing all it can to inform people about how to handle tuberculosis and the people are beginning to get alarmed and are assisting the doctors in preventing the spread of tuberculosis and other diseases as a great many begin to believe in preventive treatment.

By invitation, or rather suggestion, the society will meet with the teachers' association at Sunshine, within the next few weeks, the time not having been decided upon as yet. An elaborate program will be offered consisting of teachers, preachers, laity, lawyers and doctors, which will be known as Public Health Day for Wolf Creek Precinct. Everybody is earnestly requested and urged to assist in this great public health day.

The Committee on Program and Arrangement, Dr. L. D. Hammond, chairman; Hon. D. C. Hopper, Prof. Claud Harmon, Wolford Edmonds, Ben this committees in Dr. vay tep Dr CEDremfwypapuan Edmunds, Andrew Stephens, and J. S. Stephens. With this committee on program and arrangements will sure leave nothing undone. Dinner and refreshments on the ground. Everybody bring a little "snack" and some for visitors.

The hour getting late for those of us who live some distance, the society adjourned to meet again shortly as indicated above.

J. B. SCHOLL, Secretary.

Taylor—The Taylor County Medical Society met in the office of the secretary, in Campbellsville, on July 8, 1915.

Present, Drs. Buchanan, Black, Gowdy, Reesor, Buckner, Murphy and Atkinson, Dr. Alexander visiting.

Several interesting cases were reported.

E. L. Gowdy reported case of hematuria developed last December, probably from the effects of a fall sustained in September previous. Urine recently indicated the presence of blood and pus. Patient had shown improvement, but after severe exertion playing ball symptoms returned.

B. T. Black reported case of six year old child with a temperature of 102, pulse 94. On 8th

temperature higher, typhoid tongue, abdomen much swollen, nausea, and bowels have not responded to an enema. Diagnosis appendicitis. The opinion of all the members was that the diagnosis was correct, though some expressed the possibility of intussusception. (Dr. Reesor operated on this case three days later, appendiceal abscess.)

O. R. Reesor reported case of a lady 66 years old. Became sick on Friday. Saw her on Sunday following. Temperature 103. Next day temperature 99, and abdomen very tender. Tuesday Temperature 100 and tenderness much less. Wednesday an attack of severe pain, temperature 100 pulse 56. Operation Thursday: ruptured appendix, much necrosed. Patient has made an uneventful recovery. Dr. Atkinson saw the case in consultation and also assisted in the operation and thinks it showed some unusual characteristics considering the mild constitutional symptoms and severe local conditions. The members congratulated Dr. Reesor on the successful outcome of the case.

J. S. Buckner in referring to cases of Drs. Black and Reesor, says we usually have more distension of the abdomen in children than grown people, in all abdominal conditions.

E. L. Gowdy read a paper on "Management of the Newly Born." The paper was highly complimented by all the members during the discussion, and all endorsed Dr. Gowdy's plea for the mother to nurse her own baby.

J. S. Buckner read a paper entitled "The Rheumatic Heart." This paper and the discussion emphasized the importance of preventing heart complications by prompt and careful treatment of the primary trouble as the best means for such prevention. The essayist, in closing, emphasized the importance of keeping the patient quiet in bed so as not to overtax the heart.

J. L. ATKINSON, Secretary.

Woodford—The Woodford County Medical Society held its regular monthly meeting at Midway, on the evening of August 13th with the following members present: Drs. Anderson, Blackburn, Crenshaw, Hodge, Risque, Sleet and Collette.

Dr. Stedman being absent, Dr. Crenshaw presided.

W. C. McCauley, the author of the paper for the evening was not present.

B. D. Knox, of Georgetown, who had been invited by the society to be their guest, addressed the Society on "Organization." He spoke of the reasons for, and the advantages of, county organization and the means whereby it can best be accomplished. His talk was very practical and interesting. A vote of thanks and appreciation was tendered him for the interest he had taken in the welfare of Woodford County Medical Society.

A committee appointed by the presiding officer reported that they would appoint Dr. McCauley to read his paper on "Puerperal Eclampsia" at the next meeting, which will take place at Versailles on the evening of the second Friday in September.

WM. T. COLLETTE, Secretary.

BOOK REVIEWS

The Limitation of Offspring.—By William J. Robinson and published by The Critic and Guide Company, New York City. Price \$1.00.

The title of this book forces itself upon one's attention. The views of the author would cause the established, conventional, set-to-order stereotyped individual at first to open his eyes in surprise, in wonder, and then have a distinct physical shock resulting in muscular twitchings or convulsions and, at last, from sheer exhaustion, fall over in a dead faint. To the individual who has thought about the complex relations of life, who is not surprised at original suggestions, based on common sense or necessity, and who is not narrowed by bigoted opinions but is willing to see the truth, it becomes an interesting discussion.

Simplified Infant Feeding, with seventy-five illustrative cases, by Roger H. Dennett, Adjunct Professor of the New York Post-Graduate Medical School. Published by J. B. Lippincott Company, Philadelphia. Price \$3.00.

Some of the most important chapters in this book are Bottle-Fed Babies, Digestibility of the Food, The Proper Quantity of Food to Supply the Caloric Needs, When to Ignore the Caloric Requirements, Diarrhoeas in Bottle-Fed Infants, Treatment of Diarrhoea, Vomiting in Bottled-Fed Infants, Loss of Appetite, Breast Feeding Diarrhoeas, Vomiting and Constipation, Bottle Weaning, Cow's Milk, Irrigating the Bowels and Proprietary Foods.

Mothercraft.—By Sarah Comstock and published by Hearst's International Library Company, New York City. Price \$1.00.

This is a book written in popular language and deals with preparation for the coming of the baby, Feeding It, Looking after its Growth, Its Physical Preparation for Life and its concluding chapters relate to the Growing Mind of Your Growing Child. It is a good book to recommend to young mothers.

Applied Immunology.—By Drs. B. A. Thomas and R. H. Ivy and published by J. B. Lippincott Company, Philadelphia. It has five colored inserts and 68 illustrations in text.

There is no question but that marked progress in serological and bacteriological research in of the highest clinical value, diagnostically and medicine lately has been made, leaving to results

therapeutically. It is also equally true that there is a great deal of confusion existing in the minds of the doctors as to the usefulness and uselessness, dangers and limitations of the use of sera and vaccines. This book seems to try to render available only that which is actually useful and practical. It is a comprehensive and complete discussion of the entire field of immunity as related to sera and vaccines.

The Treatment of Fractures.—With Notes Upon a Few Common Dislocations.—By Charles L. Seudder, M. D., Surgeon to the Massachusetts General Hospital; Associate in Surgery at the Harvard Medical School. Eighth Edition, Revised and Enlarged. Octavo volume of 734 pages, with 1057 original illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Polished Buckram, \$6.00 net; Half Morocco, \$7.50 net.

The popularity of this work is shown by the exhaustion of the Seventh Edition. It is certainly practical, up-to-date, profusely illustrated and printed on good paper and enjoyed by reason of its excellence and universal use.

Diarrheal, Inflammatory, Obstructive, and Parasitic Diseases of the Gastro-Intestinal Tract. By Samuel G. Gant, M. D., LL. D., Professor of Diseases of the Colon, Sigmoid Flexure, Rectum, and Anus at the New York Post-Graduate Medical School and Hospital. Octavo of 604 pages, 181 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth \$6.00 net; Half Morocco, \$7.50 net.

Some of the important chapters in this excellent book are examination of feces, use of roentgen rays, diarrhoea in nasal diseases, diarrhoea in nasal diseases, diarrhoea in Pancreatic Diseases and Acute and Infectious Diseases on Cholera, in Sepsis, Actinomycosis, Leukemia, Cerebral Spinal Meningitis; Nocturnal Diarrhoea, Enterocolitis, Tubercular Enteritis, Symptomatic Remedies, Surgical Treatment, Entamoebic Colitis, Serums and Vaccine Treatment and Intestinal Parasites. This is a splendid and practical book.

The Cancer Problem.—By William Seaman Bainbridge, Professor of Surgery, New York Polyclinic Medical School and Hospital. Published by MacMillan Company, New York City.

This book takes up the history of cancer, Botanical and Zoological distribution of Cancer, Statistical Considerations, Etiology, Histology, a Resume of the World's Work of Cancer Research, Clinical and Diagnosis, Prophylaxis, The Investigation of "Cancer Cures," Non-Surgical Treatment, Surgical Treatment, Irremovable Cancer, Institutions for the Care of Cancer Patients and the Campaign of Education. One cannot peruse the study of this book without feeling that he has the latest and most important information relative to the cancer problem which is

rapidly becoming a serious one and which must be considered by the physician and laity as a great public health problem.

Essentials of Laboratory Diagnosis.—By Francis Ashley Faught, Director of the Laboratory of the Department of Clinical Medicine in the Medico-Chirurgical College of Philadelphia. Published by F. A. Davis Company, Philadelphia. Price \$3.00.

This is the fifth edition of this popular and meritorious work. The book is a condensation of the work found in any exhaustive text book on clinical medicine and serves to point out to the busy student and practitioner simple and reliable methods by which he may obtain information without unnecessary waste of time by difficult, tedious and untried methods. It takes up the use and care of the microscope, methods of examination of the discharge of the human body, examinations for animal parasites and a special chapter on Serodiagnosis. It is beautifully illustrated and is a valuable edition to a Laboratory.

The Eye, Ear, Nose and Throat.—Volume III, Series 1915. By Wood, Andrews and Ballenger and published by the Year Book Publishers, Chicago. Price \$1.50.

The authorship of this volume insures its value. Among the most important chapters is Hygiene of the Eye, Diseases of the Conjunctiva, Retina and Optic Nerve, Glaucoma, Ocular Therapeutics, Comparative Ophthalmology, Internal Ear, Accessory Sinuses and Syphilis.

Alveolodental Pyorrhea.—By Charles C. Bass, M. D., Professor of Experimental Medicine and Foster M. Johns, M. D., Instructor in the Laboratories of Clinical Medicine at the Tulane University Medical College, New Orleans, La. Octavo volume of 167 pages, with 42 illustrations. Philadelphia and London: W. B. Saunders Company, 1915. Cloth \$2.50 net.

This book presents in a simple, concise way the subject of Rigg's Disease in the light of recent information. Former theories and ideas as to the cause and treatment are left out altogether. It should be of practical use to both the physician and the dentist.

Surgery of the Blood Vessels.—By J. Shelton Horsley, Surgeon-in-charge of St. Elizabeth's Hospital, Richmond, Virginia. Illustrated. Published by C. V. Mosby Company. Price \$4.00.

This book presents the scientific and laboratory features of vascular surgery and, particularly, its practical aspects that may be of interest to both the surgeon and the general practitioner. The technique of studying blood vessels and transfusion of blood, treatment of hemorrhage and aneurisms, thrombosis and embolism, varices, varicose veins, and hemorrhoids are also considered. The book has 296 pages.

International Clinics.. Volume II, Twenty-Fifth Series, 1915.—Published by J. B. Lippincott Company, Philadelphia.

Under Diagnosis and Treatment, is to be found a discussion of Emetine Therapy, Animal Extracts and the Present Status of Digitalis Therapy. Under the head of Paediatrics, tuberculosis is given considerable attention. A series of articles by Cheney on Enlarged Spleen, Splenic Enlargement and Anterior Polio-Myelitis. Miller's contributions on a Consideration of Some Painful Conditions of the Foot is of value; Skillern, Deaver, Cumston, Ballenger and Harold Hays are contributors to the Section on Surgery. The book is well illustrated and quite up to the excellency of these clinics.

General Surgery.—Volume II. Edited by John B. Murphy and published by the Year Book Publishers, Chicago. Price \$2.00. Some of the chapters in this volume are Anesthesia, Radiotherapy, New Instruments, Wound Healing and Pathologic Interventions, Tetanus, Malignant Tumors, Myositis, Rupture and Stricture of the Esophagus, The Mamma, Healing of the Abscess, Tuberculosis and Carcinoma and Paget's Disease, The Appendix, and Rectum and Rupture Tuberculosis of the Spleen.

Sodden Skin Surfaces.—A strong solution of potassium permanganate painted over macerated, sodden skin surfaces, as between the toes or about the anus, and allowed to dry, gives much relief and often affects a cure. The application may be made daily or less frequently. Keep the painted surface dry with talcum powder and absorbent cotton.—American Journal of Surgery.

The Newborn Babe.—The needs or wants of a child soon after birth are the same as later on in life, only a little more difficult to interpret. The cry, the only language of the newborn, is the same for all of its wants, whether hungry, thirsty or uncomfortable from heat, cold, moisture or what not. I instruct my nurses that the cry of the newborn indicates one of three things—hunger, thirst or want of bodily attention. A baby will cry for water as well as for nourishment.

I recall a case which occurred several years ago—it was on the fourth day of the puerperium; the baby had been crying a few hours, and would not be satisfied with its nourishment, which was plenty, or by any manner of bodily attention. On my arrival I asked for a cup of hot water the hot water freely to the child, giving about an and a teaspoon. I at once began administering ounce in all. I then placed the baby in bed and he went to sleep almost immediately, and slept for three hours without awakening. This was all the colic medicine this baby ever received.—E. N. Ritter, M. D., Pediatrics.

KENTUCKY MEDICAL JOURNAL

BEING THE JOURNAL OF THE KENTUCKY STATE MEDICAL ASSOCIATION

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No. 12

EDITORIAL.

READ THIS JOURNAL.

In this JOURNAL our readers will find Dr. Kincaid's presidential address, Dr. Gaither's oration in surgery, the essay of our general counsel, Hon. Fred Foreht, on "The Legal Status of the Physician," and the splendid paper of Dr. Stevens on the Harrison Law. By a unanimous vote of the Association, afterwards confirmed by the Council and House of Delegates, the officers were directed to send copies of these papers not only to every member of the Kentucky State Medical Association, but to every practicing physician in Kentucky. You are urged, therefore, to read everything in this JOURNAL. It may save you thousands of dollars, and even your professional reputation and standing.

In addition to the above important articles and addresses, there will be found the stenographer's copy of the minutes of the recent general session and of the House of Delegates as well. Every member of the Association is entitled to know what is done by their delegates at the annual meeting, and a careful perusal of these pages will tell you about it.

This is the largest edition of the KENTUCKY MEDICAL JOURNAL which has been published. It will reach many physicians who are not in the habit of receiving it. Many of them think they are members of the State Association because they did join once some years ago, and the editor was directed to call the attention of the membership to the fact that the annual dues should be paid on January first of each year. Pay them to your county secretary on that day and there will be no question of your good standing, and you will receive twelve copies of the JOURNAL fresh from the press. There was never a time when it so greatly behooved the members of the profession of the State to stand together and study the problems which confront us all and which involve the health, lives and happiness of practically the entire population of the State, and those

who have not yet heard the call to duty and lined up with our strong Medical Association should take this opportunity of doing so.

While reading the pages of the JOURNAL, our members and others are especially urged to look through the advertising pages. These have been selected and restricted with as much care as any other part of the contents. The State Association vouches for the financial responsibility of every advertiser we have. Without the help of our advertisers we could not publish the JOURNAL at all and they cannot afford to help us unless our readers, who own the JOURNAL, help them. If you want a JOURNAL like this one published every month in Kentucky, put some of your business in the hands of our advertisers, and write at least one or two of them at once a letter of inquiry about the things they advertise.

CAMPBELL-KENTON.

We wish every doctor in Kentucky could drop in some night at a meeting of this splendid society and receive the stimulation that comes from the kind of fellowship they have there. They have almost reached the limit of available material for new membership in Campbell county, and the Kenton county contingent is showing up almost as well. For the coming year the society has determined to put emphasis on even a higher grade of scientific work. Initiating this movement the staff of Speers' Hospital held a special clinic evening in October to which every doctor in the two counties were invited, and they were served with a lunch after the clinic. It is hoped that St. Elizabeth's and Booth Hospitals in Covington will have similar evenings of scientific study.

If any physician anywhere is in doubt about the value of a county society or the way to conduct one so its proceedings will be of the greatest value to its members, we would suggest that he arrange to be present at one or more of the meetings in Newport or Covington.

THE MEDICAL CORPS OF THE NAVY.

On November 15 the Navy Department will hold examinations in various states for persons desiring to enter the medical corps. Under the present distinguished Surgeon General, Dr. Braisted, this corps is reaching a high state of efficiency. Successful contestants in these examinations will attend a course of instructions at the Naval Medical School, during which course he receives a salary of \$2,000 per annum, with allowances for quarter, heat and light; and at the completion of the course, if he successfully passes an examination in the subjects taught at the school, he is commissioned an assistant surgeon in the Navy. Full information with regard to the physical and professional examination may be obtained by writing the Surgeon General of the Navy, Naval Department, Washington, D. C.

THE NEW JERSEY JOURNAL.

It is always a pleasure to commend our friends, and the editor of this JOURNAL feels in a peculiar way that many of the members of the medical profession of New Jersey and particularly those who conduct its excellent *Journal* are our friends. In its recent issue it announces that it has restricted its advertising matter to those medicinal and pharmaceutical products which have received the approval of the Council on Medical Education. The *Journal* well says: "This action has been fraught with a material loss but we have replaced the losses by inserting new and less objectionable matter so that now no nostrums or unethical wares can buy advertising space in this *Journal*; and that is more important to our members than computing the possible financial losses. It means a moral uplift. This action stands for honesty and truth, as the notice on our front cover page points out.

We invite you to carefully examine our advertising pages now and in the future. First to assure yourself that you will find them as carefully edited as the reading pages, and secondly, to fix in your thoughts the names and items advertised, always mindful of the fact that these are the firms who by their support are paying the bills of this publication; and when in need of their wares please do not forget this fact. And even when not actually buying, help *your Journal* by encouraging the advertisers by telling them that *you saw their notices in the Journal*.

Start now! Read the advertisements in this issue!"

This applies equally to the profession of New Jersey and Kentucky. In commending the management of the *New Jersey Journal* it is important that every reader of this JOURNAL realize the debt of gratitude we owe

our advertisers, without whom, such a journal as we are publishing would be entirely impossible.

THE NORTH AMERICAN CHILDREN'S SANITARIUM.

We have just received a copy of the annual report of this very remarkable institution which is located at Atlantic City, New Jersey. Dr. W. L. Rodman of Philadelphia, is chairman of the executive committee of the Institution, which is free to children afflicted with surgical tuberculosis. The illustrations in the report show better than any number of words could do the high class of work of the sanitarium. It should receive the support of everyone who is financially able to give it, and the members of our profession especially should bring institutions of this kind to the attention of those who are charitably inclined.

Winter Flies.—The winter season, naturally, is not the period in which most persons are likely to take measures to prevent the breeding of flies. In the summer, when the flies are thick, the wish will be frequently heard that preventive precautions had been taken. In the course of an inspection, January 7, by the sanitary bureau of New York, in response to complaints regarding a heap of manure, dirt and rubbish not far from a public school in a crowded district of the city, a rather startling state of affairs was revealed. The heap of manure was found partly covered with tar paper and rubbish in which, despite the cold weather prevailing—and there had been not long before a series of days with the temperature well down toward zero—flies were observed to be actively breeding. The Bulletin remarks, "This emphasizes the importance of properly caring for horse manure throughout the year and teaches anew why the filthy fly is always with us." Until definite precautions are taken during the winter to prevent the accumulation of heaps of filth and particularly piles of horse manure, in exposed situations under conditions favorable for breeding, the fly will probably continue to be the nuisance and the serious danger to health that it has always been. But it must not be forgotten says The Journal of the American Medical Association, that whenever we are ready to get rid of the fly nuisance, our boards of health can accomplish this purpose without enormous trouble, probably after the first year without much additional expenditure in the budget, and with little annoyance to the public generally. When it is recalled how much the absence of this underivable pest would mean for children alone in our crowded city life, it should not be long before there is a general awakening to the necessity of taking the now well-recognized precautions during the winter that will secure great limitation, if not entire obliteration of fly breeding.

ORIGINAL ARTICLES

THE LEGAL STATUS OF THE PHYSICIAN AND SURGEON.*

By HON. FRED FORCHT, JR., Louisville.

Since I have been General Counsel for your Association I have frequently been asked by various physicians and surgeons of their legal status. For instance, a prominent surgeon of this city has asked me on several occasions whether or not it was negligence on his part if he failed to take an X-ray picture of every fractured bone that he was called upon to reduce; and another prominent physician has asked me on several occasions whether or not it was negligence upon his part in the event he failed to use the various serums which have sprung up in the medical science in the last few years in the treatment of diseases.

I will try to answer these questions in this paper.

The medical profession must realize that in the last ten years there have been more mal-practice suits filed against the profession than in the last fifty years preceding. Whether this is due to the fact that the lawyers have found the medical profession a fertile field, or whether it is due to the medical profession itself, is a mooted question. Personally, I am of the opinion that it is due to the latter, that is, to the medical profession itself, and that the medical profession itself is responsible for the prevalence of the frequent mal-practice cases that have been instituted in the various courts within the last ten years. My reason will be given later.

I have decided to divide this paper into various subject-heads: first,

GENERAL DUTY OF A PHYSICIAN.

When a physician is employed to attend upon a sick person, his employment continues while the sickness lasts, unless put to an end by the assent of the parties, or revoked by the express dismissal of the physician. The physician is bound to bestow such reasonable, ordinary care, skill and diligence, as physicians in the same neighborhood, in the same general line of practice, ordinarily have and exercise in like cases. Time and locality are to be taken into account, and a physician is bound to exercise the average degree of skill possessed by the profession in such localities. In the absence of a special agreement, his engagement is to attend the sick as long as he requires attention, unless he gives notice of his intention to discontinue his visits, or is dismissed by the patient, and he is bound to exercise reasonable and ordinary care and

skill in determining when his attendance should cease.

But his engagement is not to cure the patient; that is, he does not insure that his treatment will be successful. The mere failure to effect a cure does not even raise a presumption of a want of proper care, skill and diligence. It is the duty of the patient to co-operate with the physician, and to conform to his prescriptions and directions, and if he neglects to do so, he cannot hold the physician responsible for his own negligence.

On the other hand, he has a right to rely upon the instructions and directions of his physician, and incurs no liability by so doing. (*Lawson vs. Conway*, 37 W. Va., 150).

The contract of the physician is that he possesses that reasonable degree of skill, learning and experience, which is ordinarily possessed by others of his profession, and that he will use reasonable and ordinary care and diligence in the treatment of the case committed to him; that he will use his best judgment in all cases of doubt as to the best course of treatment. (*Leighton vs. Sargeant*, 27 N. H., 460).

You will notice that the courts have uniformly held that the physician is bound to bestow such reasonable, ordinary care, skill and diligence as physicians in the same neighborhood in the same general line of practice ordinarily have and exercise in like cases. The law books are prolific of cases defining what is meant by the term "ordinary care," and the courts in defining the skill and care required in a treatment of a case, have used such words as "proper," "reasonable," and "ordinary," but these words mean practically the same thing.

Such care must be used as would ordinarily be regarded as proper, under the circumstances of the case. There are some statements in the various cases decided by the courts upon this question which appear to be conflicting, but there is little room for conflict when the circumstances of the cases are the same. The principal difference of opinion is as to whether or not the standard of comparison must be through physicians in the same neighborhood. Probably the courts which hold to a limitation to the same general neighborhood would not do so if there was no other physician there, or if whoever was there was grossly ignorant. The presumption seems to be that there are educated physicians in the neighborhood, and if such is the fact, it becomes immaterial whether a local or general comparison is made.

For instance, the courts have held that a physician practicing in a small village who undertakes to perform a difficult operation is bound to possess that skill and ability only

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

which physicians and surgeons of ordinary ability and skill practicing in smaller localities, with opportunities for no larger experience, ordinarily possess. He is not bound to possess the high degree of art and skill possessed by eminent surgeons practicing in large cities. (*Small vs. Howard*, 128 Mass., 131).

Second,

THE PHYSICIAN AND SURGEON MUST FOLLOW
ESTABLISHED PRACTICE.

The rule is very strict against trying experiments, so that it would seem that no advancement in the art can be had unless at the personal risk of the physician rather than of the patient. For instance, it has been held that where a doctor disunited the callus of a bone which had been set, the court said that many men very skillful in their profession have frequently acted out of the common way for the sake of trying experiments; and the court further says that it appears from the evidence that it was improper to disunite the callus without consent. Then it was ignorance and unskillfulness to do contrary to the rule of the profession what no surgeon ought to have done. It appears that this was the first experiment made with a new instrument which the doctor used, and it was a rash action, and he who acts rashly acts ignorantly, and although the physician in general may be as skillful in their respective professions as any two gentlemen in England, yet the court cannot help saying that in this particular case they have acted ignorantly and unskillfully contrary to the known rule and usage of surgeons. (*Slater vs. Baker*, 2 Wells, 349).

Third,

AS TO THE GENERAL REPUTATION OF THE PHYSICIAN OR SURGEON.

The courts have uniformly held that the question is not as to the general skill of the physician or surgeon, but as to his conduct in the particular case, and that the liability of the physician and surgeon does not depend upon the skill which he possesses, but rather on the fact of whether he has applied that reasonable skill and diligence which are ordinarily used in the profession. The fact that the physician is one of ordinary skill does not raise the legal presumption that his services in a particular case were successfully rendered, and the fact that a doctor is reputed to be negligent and unskillful cannot be allowed as proof to establish negligence or unskillful treatment in a particular case. (*Mertz vs. Deppweiler*, 8 Watts & S. 376). (*Cayford vs. Wilbert*, 86 Maine, 414; *Graham vs. Gauthier*, 21 Texas 111; *Stevenson vs. Gaisthorp*, 10 Mont. 563).

Fourth,

WHO IS THE JUDGE OF THE PHYSICIAN'S OR
SURGEON'S SKILL?

In Massachusetts it has been held that whether a physician, on making a diagnosis, uses ordinary care and skill is a question of fact for the jury (*Harriott vs. Plippton*, 166 Mass., 585).

So the Missouri courts have held that whether a surgeon after reducing a dislocation of the hip, and discovering a tendency not to remain encased, is justified in adopting a rude substitute for the regulation splint to keep it in place is a question for a jury (*Vanhooser vs. Berghoff*, 90 Mo., 487).

So also the New York courts have held that a broken bone, where it has been set and there is a protuberance plainly to be seen by a surgeon, that it is evidence that the bones are not in place, then it is the place for a jury to say whether the failure of the attending surgeon to discover this, is evidence of want of attention or want of skill. (*Carpenter vs. Blake*, 80 Barb. 488).

The Michigan courts, however, have held that a jury should not be allowed to determine for themselves by inspection whether a physician's course of treatment has been proper or improper. (*Carston vs. Hanselman*, 61 Mich., 426).

The North Carolina courts have held that what is ordinary skill and due care in the treatment of a patient is a question for the court to decide, and that it is error to leave it to the determination of a jury. (*Woodward vs. Hancock*, 7 Jones L. 384).

The Kansas courts have held, just as the Kentucky courts have held, that the definition of what constitutes ordinary skill, care and diligence is a question of law for the Court, but the application of the law to the facts is for a jury, so that the question of whether or not there has been due care in a particular case is a mixed question of law and fact. (*Tefft vs. Wilcox*, 6 Kan. 46).

In the last ten years there have been very many cases decided by the courts as to the liability of physicians and surgeons in trying so-called experiments, due, no doubt, to the fact that there has been a rapid advance in medical science. The liability of a physician or surgeon with reference to using so-called new discoveries in medical science has been recently passed upon by the Supreme Court of Michigan in a case decided on December 18th, 1914.

It was an action for malpractice against a surgeon, and the material facts were as follows: The patient was injured as a result of a fall from a scaffold on the 24th day of August, 1909; his ankle was badly sprained and

perhaps otherwise injured. He immediately called a physician who prescribed a liniment, which the patient applied for some three or four weeks. He later went to the physician's office where the ankle was examined and the injury pronounced to be a bad sprain. The patient continued to use the liniment upon the limb during the Fall of 1909 and the Winter of 1909-1910. He did some work during this period but found that when he worked the swelling in his ankle became greater, and when he stopped work it would subside in some measure.

In the Spring of 1910 the patient consulted another physician, who made an X-ray photograph of the ankle. This latter physician prescribed different medicines, among them iodine, which was applied externally. This physician's treatment was continued for a week or two but the patient's ankle did not respond to the treatment, but grew worse, or at least did not improve. In June, 1910, the patient consulted another physician. This physician also took an X-ray photograph of the ankle, and also put the injured member in a plaster cast. This was worn about two weeks and a second one was applied, and it was worn about three weeks and removed, but the patient was no better.

The patient then consulted another physician, who treated the injured limb with a hot solution and bandaged it. The swelling became somewhat reduced under this treatment, and during the summer of 1910 the patient was able to do some little work. During September of 1910 he undertook to perform ordinary labor but found that the ankle became extremely painful and very badly swollen, so that he was forced to desist. By November, 1910, the ankle had assumed such a condition that the last attending physician advised the patient that his case was one which demanded surgical rather than medical treatment. A surgeon was thereupon called in consultation, and what occurred at this consultation is set out in the testimony of the physician as follows:

"I thought the condition at that time justified and called for amputation. That is why I called in a surgeon. I told the patient that I considered the case surgical. I called the surgeon for the purpose of consultation about the patient and advise what to do, but had in view an amputation. It was my judgment that the joint had become useless and that there was no use treating it any longer. The surgeon and I made a very careful examination of the joint and the surgeon said to the patient that he could not promise him anything, but that there was some chance of saving it. I know in a general way what is called the Murphy treatment. I knew that it was

stated in the medical journals that it had in some instances accomplished remarkable results. I knew it was the treatment being used by Dr. Murphy of Chicago for chronic inflammatory conditions of the joints. I knew that Doctor Murphy was very famous as a surgeon of joints. After the treatment the temperature came down and along in the early part of February the limb assumed a condition similar to that at the time I called in the surgeon. There was no time when the limb became anything like normal, even at the time when the temperature came down and there was some subsiding of the enlargement. It was still greatly enlarged all of the time even after the exploratory examination. I still thought that amputation was justified."

"While he was still under the anesthetic I remarked that I thought it should be taken off. I don't know why I said that because the case was the surgeon's case, and I had become interested in the case. I looked at the leg and I remarked that it was better off than on. I did not consider that the ankle would ever become useful." As a result of the consultation it was determined by the surgeon, who was afterward sued for malpractice, to attempt to save the plaintiff's ankle by what is known as the Murphy treatment. This consists of an injection by means of a hypodermic syringe of a solution, the nature of which was not disclosed by the testimony.

The first of these injections was administered in November, 1910; the second, December 3rd, 1910, and the third, December 30th, 1910. At the time of the administering of the third injection the plaintiff's temperature was about 102 degrees, indicating probably that the diseased condition of the ankle was causing a serious constitutional disturbance. It was doubtless this fact which induced the belief expressed by the surgeon that the patient's life could be saved only by amputation of the patient's limb. As the result of the injections the patient's high temperature subsided. After each injection, however, the patient suffered severe pain which lasted from one to three days, requiring the administration of opiates for its relief. No marked improvement followed the injection and on February 13th it was determined to undertake an exploratory examination. This was done and the bones on the inside of the ankle were laid bare for examination. The condition in which they were found is not disclosed by the testimony, although the patient testifies that he was assured by the surgeon that the bones were alright, and that a complete cure would follow. However, the ankle did not improve but continued to grow markedly worse until on August 7th, 1912, about eighteen months after the exploratory operation, the patient's

condition became so alarming, his temperature having arisen to about 104 degrees, that it was obvious that an amputation must be resorted to or he must die. The foot was, therefore, on that date cut off.

The question before the court was whether or not the surgeon was guilty of malpractice in administering the injections commonly known as Murphy's treatment. The Court in holding that the surgeon was not liable said:

"It is obvious from an examination of the testimony that at the time the surgeon was called the plaintiff's ankle was in an extremely serious condition. It was in such a condition as, in the opinion of his attending physician, demanding amputation. Under these circumstances, the surgeon tried a remedy which appears to have been known and approved by the profession, though perhaps not generally, and which in some instances of diseased joints had achieved remarkable results. It is apparent from the testimony of the physician that a favorable result from such treatment was scarcely to be expected; as most it could only be hoped for. In as much as the only alternative at that time was immediate amputation, it would in our opinion be a strange application of the law which would hold the surgeon responsible for its failure."

In treating a broken or diseased limb the implied contract between the surgeon and patient is not to restore it to its natural condition, but to use that degree of diligence and skill which is ordinarily possessed by the average members of the profession in similar localities giving due consideration to the state of the medical art at the time. (*Miller vs. Toles*, 150 N. W. Rep., 118).

So also in a recent case in Missouri in an action for damages against a physician resulting from an attempted cure of hernia by the injection of paraffin. The testimony showed that the physician had used a method of treatment that had been used in Chicago, Cincinnati, and in Vienna, Austria, where it had been developed nine years previously, and other patients had testified that they had been cured of hernia by this method. The Court said that the evidence showed that the ordinary method of treating hernia was by surgical operation. The rule was laid down that "if expert practitioners of the defendant's school concurred in opinion about the right method of treating hernia, and the defendant adopted a method not recognized as sound, then according to the courts which had passed on the question, his conduct should be regarded as an experiment, which renders him liable for an injury to the patient in the way alleged; but if the system or treatment was recognized as proper, though there were other systems recognized as proper, he can-

not be convicted of negligence if he made use of the one he deemed most suitable for the patient's case." (*McClearen vs. Gaensfelder*, 147 Mo. Ap., 478).

In such a condition of medical science, the question of the physician's responsibility would turn on whether he administered the remedy preferred by him with the degree of care and skill required of a person holding himself out as an expert. What the court was dubious about was whether the evidence for the physician conduced to prove the treatment he used as recognized by the experts of his school as proper for the relief of hernia. That the treatment was of comparatively recent origin ought not in itself to put it in a class of innovating experiments so as to lay the physician liable for bad results, even though he displayed reasonable skill and care in the manner of applying it. This is true because some of the most approved systems of treatment, like antitoxin for diphtheria, met with general acceptance by the medical profession a few years after their discovery.

The Supreme Court of Washington has lately decided that a surgeon must not experiment in his treatment of an injury, but on the contrary, if he desires to avoid liability for his mistakes, he must treat it in some method recognized and approved by his profession as most likely to produce favorable results. If there be more than one of these applicable to the particular case in hand, he is not, of course, liable for an honest mistake of judgment in his selection of the method; but if bad results follow and liability therefor is to be avoided, it must appear that the treatment applied was approved and recognized, as well as that it was pursued with ordinary diligence and skill. (*Sawdey vs. Spokane Falls & N. R. Company*, 30 Wash., 349).

The courts, however, have held that a surgeon is bound to keep abreast of the times, but a departure from approved methods in general use, if it injures a patient, still renders him liable, however good his intentions may have been. (*Pike vs. Housinger*, 155 N. Y. 201). (*Bigney vs. Fisher*, 26 R. I., 402).

An interesting case is that of *Allen vs. Voje*, 114 Wisconsin, page 1. This was an action against a physician for negligent treatment of the patient. The Court said:

"We think that the weight of authority which holds a physician liable for a departure from approved methods in general use, if it injures the patient, however good his intentions may have been, to be a reasonable one." The Court said: "We have little doubt that if the first case of vaccination should have proven disastrous and injured the patient, the physician should have been held liable; nor do we believe that a physician of stand-

ing and loyalty to his patients will subject them to mere experiments, the safety or virtue of which has not been established by experts of the profession, save possibly where the patient is *in extremis* and fatal results substantially certain, unless the experiment succeeds." In regard to the intension, however, that the rule adopted made the physician liable in case he adopted new methods, although improved ones, and that no progress in medicine was possible if physicians must adhere to ancient methods, the Supreme Court of Wisconsin said that some standard by which to determine the propriety of treatment must be adopted; otherwise, experiments will take the place of skill, and the reckless experimentalist the place of the educated experienced practitioner; and when the case is one to which a system of treatment has been followed for a long time, there should be no departure from it, unless the surgeon who does it is prepared to take the risk of establishing by his success the propriety and safety of his experiment. This rule protects the community against reckless experiments while it admits the adoption of new remedies and modes of treatment only when their benefits have been demonstrated, or when from the necessity of the case the surgeon or physician must be left to the exercise of his own skill and experience.

In a late case in Illinois a physician used carbolic acid solution for the purpose of removing small-pox pits, which resulted in a scar, and the court held that the physician was liable for applying such a treatment, and said that the evidence tended to show that there was no treatment known to medical science for the cure or removal of small-pox pits, and that if a physician by applying a solution of acid to the patient's face mutilated his face, when he knew, or is bound in the eyes of the law to know, that such treatment was not sanctioned by medical science, and that he therefore had no legal right to perform such an operation or apply such treatment, and the treatment would not be relieved from imputation of malice in its legal sense, although there was no malicious intent present. (Graham vs. Dr. Pratt's Institution, 163 Ill. Ap. 91).

The opinions of the courts seem to be unanimous that the skillfulness of a physician in diagnosis and treatment should be tested by the recognized rule of his own school. In a recent case in Nebraska, which was an action against a physician and surgeon of the Eclectic School, for malpractice in the treatment of the patient, the rule was laid down that physicians are only bound to exercise such reasonable care and skill as are usually exercised by physicians and surgeons in good

standing in the same school of practice. The Court in its opinion said: "It seems to be a sound and reasonable rule, and well established by the authorities, that the treatment of a physician of one particular school is to be tested by the general principles of his school, and not by those of other schools, and that a physician or surgeon is bound to exercise such reasonable care and skill as is possessed and exercised by physicians and surgeons generally in good standing of the same system or school of practice or treatment in the locality or community of his practice, having due regard to the advanced state of the school or science of treatment at the time of such treatment." When a patient selects any one of the many schools of treatment and healing to serve him, he thereby accepts and adopts that kind of treatment common to that school or class, and the care, skill and diligence with which he is treated, when questioned in a court of justice, should be questioned by the evidence of those who are trained or skilled in that school or class. (Booth vs. Andrus, 91 Nebr. 810).

Thus it has been held that one who employs a Christian Scientist to treat a disease from which he is suffering, cannot after receiving the treatment ordinarily administered by such healers, without benefit, hold him liable in damages, because the method of treatment is improper, and that a person who offers to treat a disease as a Christian Scientist is bound only to exercise the care, skill and knowledge of one who undertakes to treat diseases according to the methods of such healers, and not of the ordinary physician. (Spead vs. Tomlinson, 73 N. H. 46).

I now beg to call the attention of this Association to a case decided by the Court of Appeals of Kentucky on June 18th, 1915, which is of far reaching importance to the medical profession of this state. The case to which I refer is that of Barnett's Administrator vs. Brand, 165 Kentucky, page 617.

The facts in this case briefly stated are as follows: Mrs. Barnett had been an invalid and a great sufferer for many years. In her efforts to alleviate her suffering she became addicted to morphine. In the Spring of 1911 Dr. Brand was called into the case by Mrs. Barnett's family physician, Dr. Windor, and in May of that year he removed a glass tube from her womb and drained off an accumulation of pus. After a slight improvement, Mrs. Barnett became worse. Another slight operation was performed in the early Fall of that year.

In the month of November Dr. Brand was employed to perform an operation for the removal of Mrs. Barnett's ovaries. Under an arrangement with Mr. Barnett, the husband

of the patient, Dr. Brand telephoned to the Good Samaritan Hospital at Cincinnati for a trained nurse. A Miss Tracey was sent to Maysville, Kentucky by the Hospital authorities. She was a competent nurse. She went to the Barnett home on November 22nd, the day before the operation, to prepare Mrs. Barnett for the operation. The operation was performed on the following morning. Three other physicians, Drs. Samuel, Winder and Lekeits were present. Dr. Samuel administered the anesthetic; Dr. Winder watched the patient's pulse, while Dr. Brand assisted by Dr. Lekeits performed the operation.

When the abdominal cavity was opened it was found that Mrs. Barnett was suffering from purulent peritonitis, and that one ovary was entirely gone, and it also appeared that there was a rupture in the Fallopian tube leading to this ovary, and that the tube leading to the other ovary was affected. Ordinary gauze pads were used to absorb the pus. These pads were in charge of the nurse. When the operation was nearing completion Mrs. Barnett collapsed, and it was found necessary to administer a stimulant and resort to artificial respiration.

The witnesses for Dr. Brand claimed that on account of this condition it was imperative, in order to prevent the patient from dying upon the table, to conclude the operation immediately. The affected parts were packed with drainage material, one end of which extended into the vagina. Before closing the incision, the nurse was asked if she had all of the gauze pads. She replied that she had. On Sunday following the operation Dr. Brand was informed by the nurse that one of the pads was missing. Two days later the doctor visited the patient and thereupon he reopened the incision and inserted fresh drainage. In removing the old drainage it was found that one of the gauze pads had been left in the abdomen. The evidence for the plaintiff was to the effect that her death resulted from the shock of the two operations. The doctor's witnesses agreed that the presence of the gauze pad was not the cause of her death, but that her condition was such that she would have died anyhow. The Doctor also introduced evidence to the effect that it was customary among skillful surgeons to rely upon the nurse to count the pads used in the operation and to accept her statement, particularly in cases where the necessity for haste precludes the surgeon from making an exploration.

The Court held that in performing an operation it was the duty of a surgeon to exercise reasonable care and skill; that the operation begins when the incision is made and ends when the opening has been closed in the

proper way, after all appliances necessary to a successful operation have been removed from the body. Throughout the operation the law imposes on the surgeon the duty of exercising such care and skill. The removal of the sponges or pads is a part of the operation, and an operation cannot be said to be concluded until such removal takes place. For this reason it is generally held that a surgeon cannot relieve himself from liability of injury to a patient by leaving a sponge in the wound after the operation, by any custom or rule requiring the attending nurse to count the sponges used and removed, accompanied by the statement of the nurse that the sponges were all properly accounted for, and his reliance on such statements. On the contrary, surgeons are generally held liable for injuries resulting from their leaving a gauze sponge in the abdominal cavity of the patient.

A more serious question affecting the medical profession of this state was decided in this case by the Court of Appeals holding that under Sub-section 2, Section 606 of the Civil Code of Practice, that a physician is not competent in an action against him by an administrator of a patient to recover damages for the patient's death alleged to have resulted from malpractice in the performance of an operation, or to testify to any verbal statements made to him by the decedent, or as to what he saw or did in performing the operation.

In other words, the effect of this decision is that any physician or surgeon sued for malpractice by the administrator of a patient who has died, cannot testify as to any conversation he had with the patient, or as to anything he saw or did during the treatment of such patient, or in the event of an operation upon such patient, as to what he saw or did in performing the operation.

The Court in deciding this question said:

"Does the Code provision prohibit a physician from testifying for himself concerning any verbal statement of, or any transaction with, or any act done or omitted to be done by, the decedent in an action brought by the administrator of the decedent to recover damages for malpractice." The question there is whether or not the performance of an operation is a transaction within the meaning of the code. The Court after citing many cases holds that an operation performed by a physician is a transaction within the meaning of the Code of Practice of this state, and that a physician is not competent to testify as to what he saw or did in the performance of an operation.

The effect of this decision may be far reaching to the medical profession of this state. For instance, in the event a patient dies, the members of the family, in an action for mal-

practice against the physician or surgeon, will be allowed to testify that the physician or surgeon did this or did that, while the mouth of the physician or surgeon is closed by the law with reference to any such statements or conversations that he had with the patient, or in the event of an operation, as to what he saw or as to what he did in performing the operation.

In the event a surgeon is sued for malpractice and the person who gave the anesthetic, or the assistant who assisted him in performing the operation, are also made defendants in the malpractice action together with the nurse or nurses who also assisted with the operation, under this decision neither the surgeon nor the physician who gave the anesthetic nor the surgeon's assistant nor the nurse or nurses will be allowed to testify as to what they saw or what was done at the time of the operation.

I have no comment to make as to the far reaching effect of this late utterance of the Court of Appeals of this state. It speaks for itself.

In conclusion I desire to call the attention of your Association to the many malpractice cases which have been filed in the last ten years. There have been more malpractice suits filed against physicians and surgeons in the last ten years than have been filed in fifty years previous to that time. What is the cause of this? In my opinion, the cause of this is the medical profession itself. It is the petty jealousy which exists among the medical profession which has caused the so-called ambulance chaser of the legal profession to pick out and select the medical profession as a fertile field for his operations.

My experience has been—and I have tried practically every malpractice suit in this city that has been filed against a physician in the last five years,—that the same originated by reason of some other physician or surgeon,—to use a common expression,—“knocking” upon the physician or surgeon who is sued.

In one case that was recently tried I was convinced that the suit originated by reason of a remark made by a physician in a bar-room of a public hotel. This physician stated that upon that day at a certain hospital in this city he had seen a patient who had been butchered by Dr. ———. It happened that the patient died and a friend of the husband of the patient was present at the time this remark was made and communicated the same to the husband. The suit followed.

In another case recently tried in the courts of this city it was claimed that the patient died as a result of the attending physician not removing all of the placenta while delivering the patient in child-birth. Peritonitis followed the child-birth and another physician was called. The last physician is said to have

made the remark that no wonder she was in such a condition if so and so attended her, and that he had not removed all of the placenta. Of course, at the trial this last physician denied making any such statement, but there is no question in my opinion that the remark which was attributed to him was the cause of the institution of the suit.

In another case a physician who was attending a person suffering from a malignant fever was suddenly called out of the city. Another physician living in the same neighborhood was called in to attend the patient, who suffered a relapse while her regular physician was absent from the city. The last physician, when called in, upon entering the sick room went to the mantel-piece where he saw a medicine bottle, uncorked the bottle, smelled of the contents and tasted of it, and then told the family to throw it in the garbage can, and pulled out his pencil and prescription pad and wrote a prescription. The patient died. The inference was that the medicine given by the family physician was not proper, and was, therefore, the cause of the death. Not proper on account of anything the second physician said, because he said nothing, but by his actions indicated that the family physician had prescribed the wrong medicine, or medicine that was not doing the patient any good.

In another case recently tried in this city it was claimed that a broken limb was not properly set. The limb had been set by a surgeon who had had eighteen years experience, and who has set on an average of fifty limbs a year. There was some deformity in the limb, not due to any negligence on the part of the attending surgeon, but due to the nature of the break itself. A six year old doctor who admitted upon the witness stand that he had not set over three limbs during six years that he had practiced, testified that in his opinion the limb was not properly set. It developed during the testimony that the patient called to see this six year old doctor and asked him to look at his limb, and immediately upon examination of the limb this six year old doctor asked the patient who had set his limb at the time it was broken, and after having been given the name of the surgeon, remarked: “I thought so.” A suit for malpractice followed.

Innumerable cases of this character could be cited by myself and your Honorable President, who is familiar with and keeps in touch with all of the malpractice suits that are filed against members of this Association.

Why this petty jealousy should exist among the medical profession, I do not know. One thing I do know is that it does not exist among the legal profession. No one ever heard of a lawyer being sued for negligence in handling a case. No physician or surgeon is perfect.

No man is perfect. God never made any of us perfect, and before any of us, whether of the medical or legal profession, make any remark or attack upon the character or ability of another member of the profession, we should bear in mind the Biblical expression: "He that is without sin among you, let him first cast a stone." If the medical profession bears this in mind, there will be fewer malpractice suits, and the legal profession will cease to look upon the medical profession as a fertile field for their operations.

I want to take this opportunity in thanking your Honorable President, Dr. John J. Moren, who is Chairman of the Legal Defense Committee of your Association, for his untiring work in the interest of those members of the Association who have been so unfortunate as to have been sued for malpractice. His efforts have been untiring in your behalf when you have been in trouble. He has kept in touch with every case that has been filed, and has given up his time in assisting those who have been sued, when I know it has been a pecuniary loss to him, and the splendid record of the Legal Defense Committee, during the last two years that I have been your General Counsel, has not been due to my efforts or my assistance, but has been due to the hard, earnest work and labor of your Honorable President.

Oatmeal Diet for Children.—In investigations made on young animals, Watson (British Medical Journal), found that an oatmeal diet has a remarkable effect on the thyroid gland. Hence, the value of oatmeal in the dietary of young children, for, says Watson, there is no reason to doubt that moderate and physiological use of this food will be followed by a stimulation of the gland to a degree wholly beneficial.—American Medicine.

The Mixed Typhoid, Paratyphoid A, and Paratyphoid B Vaccine.—A. Castellani states that the mixed typhoid+paratyphoid A+paratyphoid B vaccine may be prepared according to various methods. The simplest mixed vaccine consists of an emulsion of typhoid+paratyphoid A and B bacilli killed by heat, or by adding 1-2 per cent. carbolic acid without heating, and standardized so that 1 c.c. contains approximately 500,000,000 of typhoid bacilli and 250,000,000 each of paratyphoid A and B. Of this vaccine 0.5 and 0.6 c.c. is given the first time and 1 to 1.2 c.c. the second time, a week later. The mixed vaccine is harmless, does not give a severer reaction than simple typhoid vaccine, and the inoculated persons develop protective substances for the three diseases.

PRESIDENT'S ADDRESS

THE RELATION OF THE PHYSICIANS TO THE PUBLIC; TO EACH OTHER AND TO THE PATIENT.*

By J. W. KINCAN, Catlettsburg.

Responding to the call of custom which demands of your President-elect an address upon some subject germane to the profession of medicine, I confess a certain natural timidity in addressing this magnificent assemblage, representative of the largest deliberative body in our State, in that an humble worker in the general ranks, I now stand in the place which has so often been filled by those whose resplendent qualities have blazoned their reputation beyond the confines of their own State to shine nation wide and secure for them fixed places in the record of scientific achievement.

Through no merit of my own except the love of my profession, and loyalty to its highest teachings, and a devotion to its interests through the channels of organization, you have indulgently and far beyond my deserts thus honored me. Words fail me to adequately express my deep appreciation of your action, and I can only say, you have placed upon me an obligation heavier than I can ever repay.

An examination of the addresses made by former presidents discloses the fact that medical history, both state and general, biography, sanitation, preventive medicine, conservation and other subjects of like import have been ably presented as well as many phases of strictly scientific medicine. As the field has been so fully covered you will scarcely expect me to bring you any new or startling subject, but if I am able to call attention to some of our duties, in our relations to the public, to each other, and to the patient, in a way to stimulate a truer and more accurate conception of them, I will have accomplished my purpose.

In recent years interest in the betterment of social conditions has been growing rapidly, and as a result of this movement, the part played by sickness and disease in determining the welfare and efficiency of a community has been recognized.

Much of the credit for the awakening of this spirit of inquiry and desire for enlightenment on the vital questions affecting the health and happiness of the people, is due to the social worker. In the past it has perhaps been the case that the physician, engrossed with the vexations and cares of his arduous profession, encountering disease in detail.

*Delivered before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

spending his energies in personal attention to his patients, has centered his interests in them and neglected the community at large. If to his preoccupation there be added an air of dignity and aloofness in the consideration of the public health and a disposition to throw all the responsibility for the amelioration of general conditions upon health organizations, without an energetic co-operation with them, then indeed is the matter of progress to be a slow one. The public is eager for information along lines of preventive medicine, and it is our duty to see that it is of the right kind. If health departments are to have their work go smoothly the people must understand the reasons for their various activities and be in sympathy with it.

It should be taught to have an appreciation of the function, the aims and the possibilities of medicine, and no one except the physician is in a position to supply such information correctly.

The bulletins and circulars issued by State and municipal departments of health are of much value, but their fullest measure of success can only be attained by the physician acting as the "follow-up-man," and emphasizing their truths and explaining to the doubting the points concerning which they are not yet convinced.

While all agree that the physician is the High Priest of service to the sick and afflicted, yet first of all he should be the Messenger of health, warning the people of the dangers by which they are continually surrounded and battling if need be for measures to correct them.

In many of our counties the local boards of health are dormant at all times, unless there happens to be an outbreak of smallpox in their midst; and the reason, as we all know, is an unsympathetic and parsimonious Fiscal Court, which will not pay a health officer. But why should we have smallpox at all? Are we as individual practitioners doing our full duty? Do we preach vaccination, do we make it a point, to see that every baby that is ushered into this world by our assistance is vaccinated in its first year and thus given the guarantee against smallpox, which vaccination affords? Vaccination stands unjustly indicted for many untoward results. Let us see to it that it is done thus early when cleanliness is easier obtained, and the protection afforded is more thorough and permanent, and thus disprove the charges against it.

For many years I have been firmly convinced that pertussis is a disease which is held too lightly by far too many physicians and given over to domestic remedies, or in the hands of careless mothers or grandmothers. That this is true is attested by the fact, that

our Bureau of Vital Statistics records about 500 deaths per year from this disease. If to this be added the very considerable number of tuberculous, who become such by reason of weakened vitality, and chronic irritability of the respiratory passages as a heritage from their whooping cough, we can readily see what a mortality accompanies it.

One case of scarlet fever or diphtheria can throw a community into a panic. Yet children with whooping cough are permitted to go where they please, when they please, and as long as they are able to walk. Now and then a nervous mother will raise a protest against this utter disregard of the health of the children of her community, but to little avail.

An awakened public conscience to the dangers and seriousness of the disease is needed. We should be instant in season as well as out of season to point them out and emphasize them in such a manner that those who are negligent and careless of the rights of others, shall suffer an ostracism which will bring them to a realizing sense of their deficiency.

Dr. John W. Trask, of the U. S. Public Health Service says, "The practicing physician is essentially a part of the health department. This is true whether the physician recognizes it or not, and whether the community recognizes it or not. The physician is the outpost, the picket, that must give to the health department information of the approach of the enemy, his numerical strength, and his armament. Co-operating with an efficient health officer, the practicing physicians of a community have it within their power to make the efforts of the health department successful, or to make their success impossible."

I might enlarge upon this theme by parading the entire list of the commoner contagious diseases, but these two alone should cause us to take a mental retrospect, and if afterwards we stand self accused, of having failed in our public duty, let us take a firmer grip upon the future, stirred by a sense of personal responsibility, and driven by the desire to achieve the greatest good for the greatest number.

To deny that the relations of physicians to each other are not always as amicable and pleasant as they should be, would be such a serious misstatement, that it would immediately bring a challenge as to its correctness from every one here. It is a deplorable fact as patent to the laity as to ourselves; but the condition is certainly improving and growing better. To remedy the friction and correct the errors upon which so much of it depends, has been one of the chief aims of organized medicine, and in furtherance of this purpose the American Medical Association has

adopted certain rules of conduct entitled "Principles of Medical Ethics." Ethics briefly defined is "The Science of Human Duty"; the science of right character and conduct." It is as futile in medicine as it is in the State to attempt to force a man to practice the golden rule by legislation, and we must content ourselves with admonitions against its infraction, and illustration of its specific application to various phases of our professional life.

The attitude we assume towards our professional brethren is partly a matter of training partly a matter of temperament. If we have failed to grasp the higher conception of our profession, the relief of suffering and disease, and the general uplift of humanity, and look chiefly on the material side, seeking for the greater financial gain, we have subordinated the finer and nobler qualities of our nature. So it is that when greed, avarice or envy, that pain of the soul as Plato calls it, dominate our thoughts, our actions controlled by one or all of them, we become inconsiderate of the rights or feelings of our brethren.

It may be that temperamental conditions, when incited by the ingratitude of our fellows, or the idle chatter of a neighborhood, causes the old Adam in us to arise and leads us into forbidden ways. If we would only remember that all of us live in glass houses, a type of structure peculiarly vulnerable to attack, we would not be so prone to criticise, or disparage the work of others. I commend to your earnest attention the beautiful sentiments of the greatest teacher of our age, the incomparable Dr. Osler, on charity, embodied in his farewell address to the medical profession of the United States entitled, "Unity, Peace and Concord."

It is a very common thing to find a human skull or its plaster cast upon the doctor's desk, doing duty either as a paper weight or tobacco jar. If it brings to mind the thought

"Within this ghastly skull once lived and throbbed

A human brain, with human passions
fraught,

Here envy dwelt, and scorn, and love, and hate;"

how much better if it's place were taken by the Japanese figure of the three monkeys, one covering its ears with its fingers, the other its eyes, and the third its mouth. The significance of which is, "I will hear no evil, I will see no evil; I will speak no evil."

As I believe the violations of the code frequently arise from ignorance of its requirements, rather than intentionally, I think it should be read at every annual meeting of

the county societies in order that each member may be grounded in its teachings.

The relations of the physician to his patient are varied and necessarily influenced by the character of the malady he may be called upon to treat, as well as by the temperamental conditions with which he is confronted.

It would seem at times that like St. Paul, he must be all things to all men. His manner should be courteous, marked by dignity rather than familiarity, sympathetic, yet firm, if need be, tactful but not designing, cheerful and pleasant. An almost inexhaustible stock of patience is of the utmost importance, to which must be joined a delicacy of feeling and honesty of purpose, would he win the respect and confidence of his patients and commend the attention of those who do not avail themselves of his services.

In short, he should take into the sick room the attributes of a gentleman, but equally, or more important, a scientific training and skill, the extent of which marks his preparedness for service in his most important relations to the patient viz: diagnosis.

Dr. Osler says, "In the fight which we have to wage incessantly against ignorance and quackery among the masses, and follies of all sorts among the classes, diagnosis, not drug-ging, is our chief weapon of offense."

If the mission of the physician were merely to treat disease the burden of his work would be immeasurably lightened. It is a comparatively easy matter if one is sure of his diagnosis to institute a line of treatment which will either cure the condition, or ameliorate the most prominent and distressing symptoms. By reference to text books and current medical literature, he can vary the treatment from time to time if he has exhausted his personal knowledge, so that the patient will have the benefit of the experience and teachings of the best trained minds in the profession. But correct diagnosis must precede treatment if success is to crown our efforts and "there is the rub."

Medical science might almost be said to be an achievement of the last century. Before that time there was much teaching, an equal quantity of mysticism and empiricism, more of guess work, and but little real knowledge. The introduction of the microscope into the field of medicine laid bare many of the secrets of bacteriology and paved the way for the use of antitoxins and vaccines and of hematology with its attendant serum therapy.

The discovery and perfection of general anesthesia has made it possible to determine through exploratory operations what could only have been guessed at otherwise. So too the perfection and development of the X-ray

has laid bare the inner recesses of the human body in a truly miraculous way.

The great discoveries are not all made by the professors in our colleges. Jenner worked out his discoveries in a village; McDowell, Long and Sims were country doctors; Koch was a district physician. The man who works is rewarded if not by discoveries, at least by a sense of satisfaction of work well done, which after all is the greatest reward the world can offer.

We need never fear to impress a patient with our ignorance if we confess to him that we don't know what is the matter, but that we need to further observe and study the case. The doctor who loses ground is the one who really doesn't know, and won't say so, and doesn't care to find out, but simply drifts along, temporizing and trusting to the *vis medicatrix naturae*. He is aptly described in the Arabian proverb,

"He who knows not and knows that he knows not is simple, teach him."

Many patients are pleased at the prospect of having something unusual or interesting the matter with them and they will all be better satisfied when we have neglected none of the modern helps to diagnosis in arriving at an opinion.

The snap diagnosis pleases him who makes it more than it does any one else. It sometimes takes days before one can be fairly certain of a diagnosis, but during this time the student who recognizes that "its final object is to be able to treat disease intelligently, and the application of scientific methods to the completeness of discrimination and recognition of disease constitutes the art of diagnosis" has not retrograded in professional ability.

The diagnosis of a case depends on (1) history, family and personal; (2) physical findings; (3) laboratory findings; (4) observation, and (5) reason.

Sometimes when pressed for time and confronted with some prominent symptoms we rely upon them too much and neglect to secure sufficient history.

I believe that a painstaking physical examination is more neglected than anything else in making a diagnosis. We should know the condition of the heart and kidneys in every case we treat. So, too, if the laboratory reports tuberculosis in the sputum should we know how extensively the lungs are involved in order to be able to tell the patient what is his chance for recovery. It may impress the patient to listen to the heart with the ear to the chest through the clothing, but we know it practically tells us nothing, except that the heart and lungs are at work.

"We make mistakes; other people commit sins." A wrong diagnosis after due examination (a thing that happens to all of us) is a

mistake and a pardonable one; a wrong diagnosis arrived at without due examination (a thing that happens to the other fellow) is a sin; medically speaking it is "the unpardonable sin." That an examination was not allowed is no excuse for a wrong diagnosis. If you can't convince the patient that an examination is necessary, quit the case for it is better to lose the patient than to lose reputation. Moreover, do not treat first and examine afterwards; for then you may be called upon to treat not only the disease, but the effect of your own treatment. After an examination has been made, if still in doubt, admit it. If you do not know enough about the case to satisfy yourself, it is not safe to assume that you know enough about it to satisfy the patient. This is not only indifferent ethics, but also bad policy."—(A. E. Giles, *Clinical Journal*.)

Which is the worst error to fail to observe certain conditions or to observe them and interpret them incorrectly? In the writer's opinion, the first is much the worst error. Observation is a matter of patience, training and thoroughness, in all of which a man may improve himself but the use which he makes of his observation is partly a matter of his mental equipment. True he can train his power of thought and judgment to some extent but we vary greatly in the quality of our cerebral cells, and the saying of the father of medicine "experience is fallacious and judgment difficult" is always true. To observe correctly and decide wrongly is sure to happen to the best of us, but to observe carelessly happens only when we permit it."—(Thos. McCrac, *Canadian Medical Association Journal*.)

Reason, after all, is a most powerful aid to diagnosis. To weigh the worth of each sign and symptom and to formulate a clear idea of the disease process, which is going on even though we do not name it. Arno'd Bennet in his "How to Live on Twenty-four Hours a Day," says "I am entirely convinced that what is more than anything else lacking in the life of the average well-intentioned man of to-day, is the reflective mood."

It is an easy thing to grow lop-sided in our mental processes and herein lies our danger in making diagnosis. One man grows strong on history and neglects the laboratory or vice versa. They should go hand in hand. The results of the latter must be fitted into the clinical findings. No odds how complicated the clinical picture may be it is of extreme importance to be able to harmonize as many symptoms as possible under the head of one disease. It has been said that "No greater compliment can be paid the diagnostician than his ability to differentiate sharply between a complicating or symptomatic, and a

co-existing and independent disorder. When such a confused clinical picture is present one should have the diagnostic ability to carefully separate and analyze the findings and only reluctantly admit the presence of a second ailment after a most painstaking and thorough examination.

The patient is entitled to this at our hands and it is our duty to omit none of the diagnostic aids which are the development of modern medicine in order that we may arrive at the fullest knowledge of the case in hand. If we are not familiar with the technique of their use then the patient should be informed of our limitations and if their means permit, should be referred to those who are. Every one should systematically use the stethoscope and the sphygmomanometer and make chemical examinations of the urine; while work with the microscope X-ray, the cystoscope and bronchoscope, and serum tests should be left in the hands of those who by reason of special training are peculiarly fitted to do it. Any other course is alike incompatible with our highest duty to our patient as well as to ourselves.

Apcoplexy.—C. M. Reimsen, Atlanta, Ga., (Jour. A. M. A., July 10, 1915), says that while it may appear radical to advocate operative procedure in intracerebral hemorrhage there are two rather positive operative indications, namely, to relieve pressure of the clot and remove it if possible, and to relieve the brain from the secondary changes. He reports a case in which there was manifest intracerebral pressure in which an operation for decompression was made six days after the beginning of the attack. The brain was edematous and tended to project through the opening. The cerebral lateral fissure was demonstrated and posteriorly there was found a clot about the size of a golf ball, suggesting a lenticular hemorrhage which had worked out through the surface of the insula. The recovery was good, though considering the time the pressure had lasted, Reimsen was not optimistic as to the success of the operation. He thinks it is suggestive that such patients may be operated on with advantage if taken early enough.

Mushroom Poisoning.—In mushroom poisoning remember that atropine is often an effective antidote. This is especially true when the symptoms simulate those of pilocarpine poisoning—and in these cases trouble usually begins early. When the appearance of symptoms is delayed for six to twelve hours or longer, atropine is usually contraindicated and treatment must be eliminative and supportive.—Wisconsin Medical Journal.

ORATION IN SURGERY

A PLEA FOR UNIFORMITY OF TREATMENT IN UNDOUBTEDLY SURGICAL DISEASES.*

By J. G. GARTHER, Hopkinsville.

A few years ago, in the city of Jackson, Mississippi, a distinguished surgeon of this State, delivered the annual oration to the Mississippi State Medical Association, of which I was then a member. Dr. George A. Hendon, a Mississippian by birth had been invited to come back from Louisville for a few days and receive this honor at the hands of the profession of his native state. He had been born among the cotton blossoms of Mississippi, had been reared in her traditions. Armed with the ideals of the Southland, he had gone forth to a distant state and won for himself an envied place in our great field of work. To him, therefore, it was an occasion of great gratification, honored and recognized by his own people in his own state. His emotions were truly genuine, when in beautiful periods he told us of the joy that came to him that night.

I was then a young Kentuckian, just entering the practice of medicine in his state. As he spoke, describing to the Mississippi audience the glories of his adopted state, her kindness to him, I felt a thrill of pride and patriotism for my old Kentucky home, and there was born in me then the almost futile hope, that some day, I too, might go back to *my own* state, to *my own* people as a son who had pleased.

You will understand then, gentlemen, with what pleasure, I stand before you this morning to deliver the oration in surgery to the Kentucky State Medical Association. It is the fulfillment of that youthful dream. May I not therefore, express to you, my gratitude in its fruition and thank you for this privilege.

My oration shall be brief. It is given to only a few men in a generation to discover new truths to the world. The mantle of true genius falls on few. Most of us must follow where the path is already well-beaten. So this morning I can give you no new message of things surgical. But I have tried to single out from the warp and woof of the surgeons work a thought that I would leave with you. Medicine and surgery have suffered much at the hands of irregular practitioners of all descriptions and castes. I think often the fault is our own. Among the many, many things which happen to discomfit the

*Delivered before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

regular physician, none is worse than a lack of uniformity of treatment of certain well-known surgical diseases. The varying types of treatment offered for these conditions by the other physicians, often brings discredit to the honest doctor who insists that the patient have prompt surgical attention for strictly surgical diseases. You all do know of your own experience some bitter case in which you had tried in vain to have the patient operated upon, but whose friends found another physician who could cure cholelithiasis without operation.

This, then, is the thought I have chosen for my address, a brief plea with every practitioner of medicine in our great state, for uniformity of treatment in undoubtedly surgical diseases. To many, this will be unnecessary. Already they have paid the penalty of procrastination. But to those who have stood aloof or held out hope for cure where none could be except by surgery, I offer the argument of this oration.

The need of uniformity of action is apparent to all thinking men. The great armies of France and England last summer, through uniformity of action, closed upon the German army under the crown prince on the Marne River and Paris was saved.

This process of uniformity and standardization of treatment has found expression in many ways in our profession.

We now have uniformity of requirements for entrance to our medical schools. We expect every school to have these requirements and to submit the applicant to them.

Our medical schools themselves, are being gradually standardized. The old time commercial medical school has gone. In its place have arisen schools with uniformly good equipment and careful instruction from men who devote their whole time to teaching. These schools are graded and classed according to the degree with which they approach this high standard.

More recently, this process of standardization has extended itself to the ranks whom I represent to-day, in the formation of the American College of Surgeons.

The great good which may accrue from constant uniformity of handling any given proposition has brought about these changes which I have mentioned.

More specifically, I call upon you to witness that in the realm of medicine, wherever any remedy has been found to give 90 to 95 per cent. of cures, it is uniformly employed and unquestioningly by every practitioner.

Yet when surgery demonstrates that she can cure 90 to 95 per cent of some given condition by surgical operation, it is often neglected, delayed and even shunned. The rule

by which the doctor squares his case medically becomes a circle surgically.

The treatment of diphtheria is uniform: the treatment of hernia should be. People no longer argue over the administration of antitoxin to-day, it cures 90 to 95 per cent of cases, if used early. Operation for acute appendicitis will cure 90 to 95 per cent. if used early, yet we still have arguments over it. Why? Because in the case of diphtheria, the people have been trained by the physician to readily accept treatment by antitoxin, because of its uniformity of use and uniformity of relief. In the case of appendicitis, with equally as efficient a weapon, we ourselves do not uniformly urge its application.

Medicine has specifics for such diseases as syphilis, malaria, diphtheria, uncinariasis and amoebic dysentery. Surgery has specifics for such diseases as gall-stones, hernia, haemorrhoids, appendicitis, enlarged prostate. It is the plea of this oration that no true physician shall obstruct in the application of these surgical specifics, but train his clientele to seek them.

Let us think for a moment of as common a condition as hernia. It is an elemental proposition, understood even readily by the laity as incurable save by an operation. No one questions it. It is easily amenable to surgical cure, yet the percentage of cases that apply to physicians for a beginning hernia, who are urged to have a radical cure is small, pitifully small. Surgery stands ready to cure the patient but because in the neolithic age someone invented a truss, he is allowed to elect this palliation. It is the easiest way out at the time, the line of least resistance is followed. I do not believe any man has done his full duty by a hernia patient, save in the very aged, as long as that hernia has not been repaired.

I plead with you this morning that we establish uniform surgical treatment to every hernia in our practice and to each new one that presents itself. Think of the deaths prevented from strangulation, of the relief to humanity chafing under its burden of steel and leather.

That gall-stone disease is strictly surgical, admits of no doubt. Yet we often find in nearly every community some one physician who attempts to gain a reputation for being able to remove or cure gall-stone without operation. It is to such a one that this oration is addressed. In the words of Brutus,

"And him have I offended."

The nature of gall-stone disease lends itself readily to the purpose of the charlatan and the fakir, its periods of remission in attack giving rise in the patient to belief in his cure. He boasts it proudly. However short-lived

the cure may be, the reputation of the remedy grows apace.

The true physician has a further difficulty in applying surgical relief to the sufferer from cholentiasis, because during the acute attack or colic, operation is inadvisable. It is often a matter of difficulty, when the attack is over, to persuade a well-feeling patient to submit to an operation.

Notwithstanding these facts, I beg of you to have a uniformity of treatment for this surgical condition. Its remedy is surgical. In its early stage it is not an operation fraught with many grave dangers. Lend it your earnest support. We should be unwilling to pose as advocates of olive oil cures of gall-stones. We have not done our full duty by the patient with gall stones until they are removed. Imagine the net result of such a uniformity of treatment. It would cut short years of suffering and invalidism, cut clear from the dangers of infections deep in the bile ducts, and the metastatic arthritides which could develop from an infective focus in the gall bladder. The economic gain is inestimable.

I shall ask you next to take up the problem of hypertrophy of the prostate. This is the saddest chapter of them all, for it claims as its victims men for whom the shadows are already lengthening, men whose race has been run. No matter how boldly or bravely they have borne themselves, it condemns them to tortures through weary days and sleepless nights. No class of patients suffer so much at the hands of the medical profession by being consigned to the catheter life. Give the ruptured man his truss and you have simply failed to cure. Give the prostatic his catheter, and you have placed in his hands the weapon of self-destruction.

At the proper time and place in the beginning of his disease, he is amenable to surgical cure. If he does not get it, then the fault is ours. These old men deserve our very best consideration. I plead with you for uniformity of treatment in this condition. Let us not be satisfied with *laissez faire* but ever struggle for constructive work.

I approach with some misgivings the subject of appendicitis. It is always the bone of contention at a medical meeting whenever mentioned being somewhat in the status of a red rag to a bull. I maintain, however, that the acutely inflamed appendix in the human abdomen is a strictly surgical condition only more so.

The last word has certainly not been said in regard to appendicitis for we are still having many deaths yearly from it or its complications. Acute appendicitis is usually most easily diagnosed in the first twenty-four hours, its symptoms usually clear and if uni-

formly treated by extirpation is readily relieved.

There is only one safe and sane procedure. Insist upon uniformity of treatment to this surgical condition. Some will be operated upon who would probably have gotten over the attack, but the many will have been saved the complications which may result from the acutely inflamed appendix.

Finally, may I not ask and plead for a uniformity of early diagnosis and surgical treatment to all types of malignancy. Our great national organizations in medicine and surgery are waking to consciousness and sensibility of the people in regard to the way that carcinomata first manifests themselves in every part of the body. Earnest men are giving time and thought to this problem. When their work has finally sunk home and some mother comes to you saying she has read in some recent current journal that cancer of the uterus begins in such-and-such a way and asks her to examine her, will we be satisfied to make a casual examination, prescribe some useless tampon and douche and ask her to return in ten days. Shall we set at naught the efforts of our brothers against this great sense of security. Surely here, if anywhere, I may plead with you for uniformity of treatment, for careful and early examination, for immediate surgical relief from what may then be a purely local lesion.

Gentlemen, I realize that what I have written, you all know full well. Yet that is no reason why it should not be repeated to you again. The story of the life of the humble carpenter of Nazareth is known to millions, yet scarcely a Sabbath but what it is retold around the globe. In spite of it and the great lesson that it carries, the world goes on, often as it wills. So it may be with you. But I hope many of you, when you cross these conditions will think of this brief plea, not for surgery but for the victims of disease and give them prompt surgical relief.

The result on future generations will be marked. Once let the idea sink into the great mass of people that certain diseases should be uniformly treated by surgical measures and the work of persuasion becomes easy. Our patients will themselves demand proper relief from their condition, securing early and comparatively safe operations in lieu of late, difficult, hazardous ones.

Ivy Poisoning.—A physician, writing to the Medical World, recommends the application of gasoline in treating ivy poisoning. Of course, the use of so inflammable a chemical as gasoline is attended with grave dangers and the person for whom it is prescribed should be properly cautioned.—Druggist Circular.

A DISCUSSION OF THE HARRISON LAW.*

By E. A. STEVENS, Mayfield.

While the necessity for this law was urgent and numbers of the profession knew that Congress had been working upon it, yet its passage came suddenly and as a surprise. Its history is this: The principal nations of the earth sent representatives to Shanghai in 1909 to formulate a plan to be made into law for the satisfactory control of the sale of opium, cocaine and their derivatives so their non-medical habitual use could be prevented. An agreement was reached whereby each nation should pass a law after the plan of the Harrison law, and that the United States should go first.

The first bill introduced in Congress was known as Cullom Bill and was introduced by Senator Cullom of Illinois. This bill was found so full of flaws that the experts who were called into the conference had it withdrawn and a second one offered, but like the first one this was not satisfactory and it was withdrawn and a third one offered known as the Harrison Bill. The author of this bill is Francis Burton Harrison of New York who was a representative in Congress from that state and is now governor of the Philippines. This is not a partisan law and was not passed as an administration measure.

I take it for granted that the provisions of this law which concern the doctor are sufficiently understood for him to carry out its intentions, but it is necessary to recite them as there are some weak places in it that should be strengthened. These weak places were caused by an effort to protect the patent medicine manufacturer in the privilege of exploiting the human race to his financial advantage. The provisions of the law are these:

First: Everybody who handles opium and cocaine or their derivatives shall register except those who handle them under the direction of someone else in authority who becomes responsible for them, and those who handle them for some governmental institutions like hospitals run by cities. Private hospitals or those partly owned by private capital are not exempt.

Second: That all orders for these preparations from dealers by any practitioner shall be made on governmental order blanks and a copy in duplicate kept by the doctor for two years so that the government inspector can see it at any time he may desire, the dealer keeping the original. Prescriptions for these substances are not to be written on these order blanks.

Third: All prescriptions for any derivative of these substances or any mixture containing two grains or more of opium or one-fourth grain of morphine or one-eighth grain of heroin or one grain of codeine or any salt or derivative of them in one fluid ounce, or if a solid or semisolid in an avoirdupois ounce must be written on a blank by the physician, giving the name of the person it is intended for, his address, the physician's full name and address and his registration number and the date the prescription was written, which must be filled on the day that it was dated.

Fourth: The doctor must keep a record of all of these drugs left with a nurse for a patient to be given during his absence and of all given in the office or sent out from his office.

There has been a ruling by the office of the collector of internal revenue that specialists using dilute solutions of these substances in small quantities in the office will not have to keep a record of all the people upon whom he uses the solutions, but he may keep a record of the solutions made, the amount used in making the solution and the date upon which they become exhausted. This has caused some criticism as it is claimed that the specialist should be required to do all the general practitioner has to do. The department of internal revenue claims that the general practitioner uses these solutions so seldom that it is not a burden to keep the record, and that it would be to the specialist, and that in addition, the specialist does not use it internally and that the danger of producing a habit is very little. All of these drugs that the doctor gives during his visit to the patient need not be recorded, but it is considered safe to keep a record of all these drugs and then there can be no question raised.

There has been a ruling by the department that when ointments containing these drugs are so denatured that they cannot be used internally, they do not come under the law. It might be mentioned here that any rulings made by the department are as much the law until the courts decide otherwise as if they were in the bill when it was passed, so it is necessary to watch for these rulings.

Under the law, you cannot telephone a prescription for any of these drugs to the drug store. The penalty for the violation of this law is as high as two thousand dollars fine and as much as five years in the penitentiary. It is a penalty to have any large amount of these drugs in your possession contrary to law. No prescription containing any of these drugs can be refilled. The above was the law till June 7, 1915, when Treasury Document No. 2213 was issued, which became the law by ruling of the department. This modified the law

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as usually understood till the Journal of the American Medical Association of June 19, 1915, on its editorial page No. 2070, says, "The practical effect of this decision is that under it, physicians must include, in all prescriptions containing any opium or cocaine or any of their derivatives, the name and address of the patient, the date and the name and registry number of the physician." This is a discrimination against the doctor and in favor of the patent medicine maker and retailer and is the result of political influence, and should not have been permitted, as I will endeavor to show. So, to be safe, prescriptions containing any opiate or cocaine or their derivatives, even to the smallest amount, for external or internal use, should be written according to the law. But the patent medicine man can make and the druggist can sell to the public patents and other preparations that contain less than two grains of opium etc., as shown in Article Six of the law, but when you prescribe them, you must follow out the form for opiate prescriptions.

Probably the most important part of this law is in regard to the habitues. This is set forth in Treasury Document 2200, which says, "In case of treatment of addicts, these prescriptions must show the good faith of the physician in the legitimate practice of his profession by a decreasing dosage or reduction of the quantity prescribed from time to time, while on the other hand in cases of chronic or incurable diseases, such prescriptions might show an ascending dosage or increased quantity." The government thereby making a distinct difference between the man who takes opium because of a chronic or incurable, painful malady and the man who has contracted the habit from temporary ailments as the cause. The inspector said to me that it was the distinct intention of the government to stop these people.

The treatment of the addict to those drugs has always been unsatisfactory till now, and has been a fruitful field for a certain class of charlatans for anybody can get them off the drug if they were confined in a sanatorium, but the so-called cure usually amounted to little for they were kept in the sanatorium just long enough to get them off and to a condition where they were physically able to be carried home, but with every cell in the body still begging for opium, and all that was necessary was a headache or possibly a fit of ill temper and he went back to his dope, a few weeks at most being all that was necessary to make him as bad as ever. Now, when the habit is broken the opportunities to procure the drug are few.

To show the damage done by the exception of the preparations containing a small amount of opium a short time ago I was called to see a supposed ex-addict to opium. I found her

in a stage of excitement, almost hysterical, her heart beating so furiously you could see the heaving of her chest almost across the room, her carotids throbbing to an alarming extent, and vomiting almost constantly. When asked what she had been doing, she replied that she was about to die and must have morphine to ease her. By close questioning I found out that she had been buying a patent diarrhoea mixture from first one druggist and then another and through different people till her condition was plainly due to the patent remedy which contained 1.99 grains of opium to the ounce. She took an entire bottle at one dose, and the condition I found her in was the result of this patent mixture taken in overdoses for some time. When it was cut off, the symptoms subsided. I have also known of their buying or trying to buy paregoric as a substitute. Chloral and all the hypnotics which contain Ch. in the formula should come under the law, as I have known some distressing cases of habit formation from these drugs.

I have seen numerous criticisms of this law in the lay press and some in the medical journals. I do not see how any doctor can feel but this is a most beneficent law, and to my mind it is of more value to the human race than all the tariff laws passed in fifty years if the medical profession and druggists will do their duty by it. When this law was going into effect I noticed the lay press of the country figured the number of habitues in the United States at over one million, which to me appears to be excessive, but recently I see it placed at two hundred thousand. Many of these people can be made useful citizens, and should be forced to comply with the law.

As to my own experience with the law and the experience of our town with it and the morphine and cocaine habitues, I want to add that, without exception, the medical profession of Mayfield guarded this point for many years, and when the law went into effect in our town, the number of habitues was small. Some of our druggists would not sell to a habitue long before the law was passed. I have been informed that in some of the towns in the country the druggists sold as much morphine as they did quinine.

Our habitues were notified of the law as soon as it was passed and told what they would have to do, and with only one exception, they were treated and cured. She is yet hunting paregoric or anything else that will help out. Personally, I am peculiarly interested in the success of this law. For the first few years of my practice I was enough interested in these cases to undertake their cure, but I found that all relapsed, and I grew disgusted, and for twenty-five years have refused

to treat any of them. I began the practice of medicine a few months after Koller discovered cocaine, or at least, after it was first put on the market in this country in the winter of 1884 and 1885. I began practice with a partner who was a little older than myself, and we treated the habitues together, and imagine my surprise to find, in the sixth year of our partnership, that from a bright, active young man, in the course of a few months, he changed to a stupid person who would sit all day in his office and leave his work undone and beg me to do it after mine was finished. He finally admitted that because of the headaches from an ocular defect, he had taken morphine to ease it until he had the habit fixed upon him. In a few months more he changed again to one of the most restless persons I ever saw, and in trying to find out the cause of the change, I discovered our firm was buying so much cocaine that it must have something to do with the change in my partner's habits. It was about this time that the medical journals had begun to discuss cases of cocaine habit as a new thing. This was in the winter of 1890 and 1891. When I asked him why he had commenced the cocaine along with his morphine, he said he saw an article in one of the journals telling how, by the use of cocaine, the morphine habit could be easily broken. Now he had both. The insane asylum for him came next. His life, full of promise, was ruined, and from that time on I have been very careful of opiates, and when the Harrison law went into effect, I did not have one habitue on my hand other than a cancer case.

I never hoped to see the day when such a law would be in effect. I am more hopeful now, and think possibly I may see a national law that will put alcohol on the same basis that it has put opium and its kindred substances. (Applause.)

DISCUSSION.

J. G. Owsley, Lilly: I want to say a few words on this subject. I do not believe that the Congress of the United States has enacted a law in the last twenty years any more important than this law is. I think it is one among the best laws ever put upon the statute books; but I am afraid that it is not going to do exactly what it is intended to do on account of some people not doing their duty. At the conference that has been referred to it was found that a great many people in the United States used opium and its derivative and other habit-forming drugs, not quite equal to the Chinese, but of keeping up a great percentage of that. On that account this law was enacted by the Congress of the United States. Now, if it is carried out exactly as it should be, I say it is one of the best laws that has been enacted and put upon the statute books.

If each and every one does his duty, it is harder to get opium and its derivatives than it is whiskey because the moonshiner will make whiskey in a wash tub when he cannot get it distilled. The moonshiner can not make the opium. It is intended to trace the opium where it is manufactured to the retail man and to the one who uses it. If this is done properly, every grain of of morphine and other habit-forming drugs can be traced to the consumer for the purpose for which he consumes it. But you know, gentlemen, in the medical profession we have some charlatans and quacks, although they hold diplomas from medical colleges. They hold certificates from the State Board of Health, yet they do not do what they should do sometimes as practicing physicians. I am not speaking of the entire body of physicians of Kentucky, but of some of them, and some of them I know do not do as they should to my own personal knowledge. The object of this law is to stop the opium habit and the morphine habit, to stop using these drugs excessively when there is no call for them except the habit-forming practice.

J. L. Atkinson, Campbellsville: This is a very important paper, and I very much regret that every physician in Kentucky could not have been here and have heard this paper read. We know that the effect of the law is that very much less opium and cocaine are sold in the State of Kentucky. I do not know how much less, but I fear more is being sold now than should have been sold. I believe the doctors here and the members of the Kentucky State Medical Association, as a rule, endorse this law and are behind the law; but we still have some physicians who are not members of this Association and they do not get to read these papers and the discussions. They do not get the State Medical Journal. In my own county every eligible physician is a member of this body; yet I fear we may have some physicians who may overlook this article when it is published in The Journal. I remember hearing of one old physician not a great while ago say he was then supplying twenty-five morphine habitues. I do not know that he is doing that now; I hope he is not doing so. I say this is an important question. I want to make a motion that the Kentucky State Medical Association have sufficient reprints of this paper to supply every physician in the State of Kentucky, and that a copy of this article be sent to every physician in the State.

Seconded and carried.

W. T. Blackburn, Louisville: There is one feature about the Harrison law, or loophole rather that has come within my own knowledge. In treating habitues by the gradual reduction plan, it has been my custom to give them a prescription. She gets through with that and then goes to another one. Is there any law to catch them.

The President: As soon as doctors release

habitués, they can be placed under restraint and a check kept on every bit of opiate they get. A doctor in ordinary practice who attempts to treat these habitués is making a mistake. He is trying to put out a fire with a squirt gun. There is no place on earth to treat these habitués except in an institution with trained nurses, and you had better be careful about the nurse or nurses.

A. Scaggs: So far as we are concerned, in my county we are getting along very well with the conditions as we meet them. There is one thing I do not understand, and that is, why anybody, whether doctor or not, can claim to be a doctor and register with the Internal Revenue Department and be allowed to handle these drugs. We have in Rowan county men practicing medicine without any certificate from the State Board of Health. They are registered with the Internal Revenue Department, and have a right to give these drugs, but yet they do not hold a certificate from the State Board of Health to practice medicine.

The President: That is a matter that should properly come within the province of your county. These people think all they have got to do to practice medicine is to have a certificate made out and get registered.

J. G. Owsley: I would like to ask a question, and I would like some one to answer it who has not been on the floor. I intended to bring it out in my previous remarks. As I have said, we have quacks and charlatans, and we have these patients, as they are termed, who are in the habit of taking opium and morphine, as the doctor says for twenty years. They will go to the doctor and ask him to prescribe for them. Possibly that doctor will refuse to do so, and they go to some other doctor, and he will give them a prescription, and if the second doctor does not give them a prescription they will go to a third, and the question is this. Do we know where this is going to stop, and what are you going to do with these patients or with those doctors who will write these prescriptions? If one does not do it, the other will. Take the medical profession in general, and I don't believe they will do it, but I know some men in my town who will do it.

R. B. Cassidy, Lagrange: A few weeks ago as health officer I received a notice from the Internal Revenue Department to inform them of the number of habitués in our county. I could not get the number of cases from other practitioners. I reported two myself, one of whom was an incurable case. Opium eaters are the biggest liars on earth. You can not do a thing with them. That is my experience with them. I am in favor of obeying the law; I am a law-abiding man and have always been so. We want to endorse this law, and county societies have it within their power to do this thing if they will do it. A hint to these fellows should make them come to

time. I favor not only getting rid of opium, but of carrying it a little further—alcohol, and not only alcohol but the deadly cigarettes.

D. H. Bush, Mt. Sterling: In our county we have had no trouble. The cases I have treated have been put in jail or sent to an institution and taken off morphine. In an adjoining county, when I was discussing this subject, they said there must be at least three hundred habitués in that county. If a man has an institution in which to treat these patients, how long is he going to treat them? He may keep it up forever. It occurs to me as though there ought to be some restrictions there.

B. C. Frazer, Louisville: We have cleaned up the situation fairly well. We are going to have trouble which will continue for a while. The Harrison law is not a perfect law. Doctors and druggists are not perfect, but if we work hand in hand we will clean up the situation very well. There are a few doctors writing prescriptions for morphine and a few druggists are filling them. There is trouble, and it will have a salutary effect. One misfortune about the law is that hypnotics were not included. A great many people will quit using morphine and take up the use of the various hypnotics. Some will quit morphine and take up whiskey. That is a misfortune. I think the Harrison law is a good law, and if the doctors and druggists work together, it will work out well.

L. A. Edelin, Louisville: Personally, I happen to be in a position to be on the inside of the Internal Revenue Department, and the doctors who are violating the Harrison Law are known to us. In the last sixty days there has been appointed a man to follow up this law, whose business it is to see who are registered amongst the doctors and druggists, and it will only be a short time before the Internal Revenue Department will be working hand in hand with the physicians and druggists who want to do the right things. It is only a matter of a short time when this evil will be eliminated. The only way we can correct it is by living up to the law.

J. J. Mudd: I would like to ask a question. There is a lady in my town who is a morphine eater and has been for twenty years. She has rheumatism and is badly crippled; she is hardly anything but skin and bones. One dram of morphine will answer her purpose for two weeks; if she does not get morphine she is going to die. She cannot live without it. What course must be pursued? Must I see that she gets morphine or must I let her die? I want that question answered. It is a good law, but in this special case what must I do?

Dr. Richardson: Are physicians required to keep a copy—a duplicate copy—of their prescriptions.

The Secretary: No. It is very important to discuss this paper freely. It is one of the best papers that I have heard presented before this

society in a long time. Every phase of the subject has been covered so completely, I am satisfied that every question which will occur to any one of us has been answered by the essayist, including the enforcement of the law and the decision of the Internal Revenue Department. No law is perfect when made; it is the enforcement of the law that makes it become useful, and not its passage, and it will be a long time in some sections before this law is enforced, because it will be enforced in proportion as the others are, and just as rapidly as the federal arm of the government can reach them, every member can rest assured that if he carries the law into effect, at least in spirit, the doctor who is doing right will be protected. If any of the doctor's neighbors, or anybody else is not doing that, they are just as certain to get them if they live long enough. The law is plain and clear; it is going to be enforced effectively everywhere. No one can register except a legally licensed practitioner of medicine. There were a great many registered at the beginning who do not have the right; their certificates will be revoked as the federal inspectors reach them. There will be no trouble about that at all.

The President: They will be prosecuted on account of illegal registration.

E. A. Stevens, (Closing): To a legitimate patient, who is suffering from a painful incurable malady, there are no restrictions. You are allowed to give him or her whatever she needs. But you must not give the patient too much. Two weeks treatment is considered the limit, but in the case the doctor speaks of he has a perfect right to prescribe for her, but not too much at a time. There is a new ruling in force, that if a doctor is found to use these drugs on himself he is not to be furnished them at all, and our druggists have adopted the rule that if any prescription calls for more than one ounce of paregoric the man who wrote the prescription does not get any. If he calls for an ounce he gets it, but if he calls for two ounces he gets none. What is necessary for you to do is to carry out the law; you are not responsible for the other man. But if every man will do his duty, particularly those in good standing, and wants to do it right, it will cut the thing down until it won't look like the same thing.

Tuberculosis.—Lawrence Brown, Saranac Lake, N. Y. (*Journal A. M. A.*, June 12, 1915), under the title of "Diagnostic Thesis in Pulmonary Tuberculosis," publishes a list of condensed statements of facts bearing on the diagnosis of tubercular disease of the lungs. They are too condensed to be abstracted, but are most deserving of frequent reference and consultation by the practitioner, as coming from an especially competent adviser.

PNEUMONIA IN CHILDREN.*

By J. MARTIN, Cynthiana.

The proper treatment of this subject requires some review as well as a discussion of both the lobar and lobular types of pneumonia.

While broncho-pneumonia is preeminently a disease of the first two years of life, and is relatively uncommon after the third year, lobar pneumonia is a frequent disease of both infancy and childhood.

Bronchopneumonia frequently follows a bronchitis or is complicated with some intestinal infection, or, it may be associated with the acute exanthematous diseases, with diphtheria or pertussis, or during the course of typhoid or any disease of bacterial origin.

It was at one time believed that the lobar type was rare in infancy and childhood. Now all clinicians seem to agree that after the ninth month of life it is of as frequent occurrence as in adults.

The etiologic factor in primary lobar pneumonia is nearly always, say in 95 per cent of cases, the pneumococcus.

Bronchopneumonia may be due to a number of organisms, the streptococcus, staphylococcus, influenza bacillus, and if pneumonococci are present, Drs. Pisek and Peas, New York, say, after studying 1,000 cases, that they are usually one of a group of organisms, or are of very low virulence. The same authorities say that the disease should be treated with a serum or vaccine derived from organisms belonging to the group causing the infection, otherwise the therapy will be useless. This is, doubtless, the reason why so many fail in the use of the serums or bacterins.

Stock bacterins are uncertain. Whether or not all of us agree as to the "bacteriological setting," so to speak, one thing is certain, that is the discovery that pneumonia is due to the entry into the body of living germs which produce disturbance in its normal action.

The old conception of this disease together with its empirical therapeutics has been relegated to the past.

The teachings of Bartholow, Smith, Stark and some others no longer are tenable. What was then a hypothesis has now become knowledge, and this knowledge is being used very scientifically, if not altogether accurately.

Briefly, to the point, avoiding all unnecessary repetitions and frills, in lobar pneumonia the child is generally healthy and vigorous. There is first a chill, vomiting and a high temperature, pain in the neighborhood of the stomach.

The pathological stages in order, are con-

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gestion, red hepatization, gray hepatization and finally resolution or death.

The heart beats fairly slow and strong, but there is hypertension, rusty sputum, if child is old enough to expectorate, running a course of from six to nine days, termination by crisis, with recovery in approximately 70 to 80 per cent. of cases.

In lobular or bronchopneumonia the child is usually asthenic, more or less weak and feeble, either before the onset of the disease, or has been made so by being secondary to some other trouble. There is a definite bronchitis, and in some cases probably directly causative of the onset.

The pathologic picture is one of bronchitis, pneumonitis by extension from the bronchioles. Frequently the adjacent foci of consolidation run together and involve considerable area of lung tissue. Low, irregular temperature, sometimes subnormal, a weak, rapid pulse, respiration not much above normal, lasting from a few days to many weeks and terminating by crisis in a few cases, most generally by lysis long drawn out.

The clinical fact that young infants and children, or those weakened by previous diseases are subjects of broncho-pneumonia, while the more favored, rugged and older children develop lobar pneumonia is explained in a series of experiments by Dr. Wadsworth. He inoculated animals with pneumonia exudates of varying degrees of virulence. In the normal animals a virulent exudate caused a bacteriemic type of infection without much lesion of the lungs; where less virulent matter was used no lesion appeared in the lungs. In animals previously subjected to trauma, cold and the injection of irritating substances, the inoculation produced lesions which were usually of the bronchopneumonic type. Lobar lesions developed chiefly in animals showing greater power of resistance. Animals were then immunized by injecting high virulence and low virulence micrococci. In the former a lobar type developed. If the resistance were not sufficient to prevent the bacteriemic types of infection, the lesions were generally of the bronchopneumonic forms.

Wadsworth compared lobar pneumonia developing in resistant and immunized animal to the same disease developing in a robust individual.

In bronchopneumonia the child's resistance has been lowered by certain diseases always characterized by a bronchitis, such as measles, whooping cough, smallpox, influenza, or to bronchial irritation due to auto infection or food poisoning. In such cases the colon bacillus may play an active part.

For a long time primary uncomplicated pneumonia has been considered a self-limited disease tending to end in recovery. But in

children pneumonia generally complicates some other preexisting disease by which it is more or less unfavorably influenced. The younger the child the more discouraging the prognosis.

Artificially fed children and those with rickets or whooping cough may be regarded as especially unfavorable.

A pneumonia superimposed on any debilitating disease is apt to be prolonged and leave the child in an extremely emaciated and asthenic condition.

The poorly nourished infant or one with an infectious or constitutional disease will stand pneumonia badly.

The underlying conditions must be taken into consideration.

Hyposiatic pneumonia is often found as a secondary affection in many poorly nourished children, due to a lowered vital resistance.

Tuberculosis may follow if the child recovers.

Pneumonia is one of the commonest causes of death after tuberculation in apnoeemia.

During its course there may develop an involvement of the ear, heart, pleura, peritoneum or meninges.

Following cases of delayed resolution, cavities, abscesses and fibroid changes may develop.

The symptoms are probably more varied in pneumonia, especially broncho-pneumonia, than in any other disease of childhood. This will apply to both objective and subjective signs.

In calling attention to cases of atypical onset, we have the so-called cerebral pneumonia of infancy and early childhood when evident meningeal irritation caused by toxemia is sometimes so great as to produce symptoms directly referable to the meninges.

Bonny says: "In small children there is often absence of cough, and the sudden onset may be characterized by convulsions. The elevation of temperature, the early restlessness and the speedy development of drowsiness and coma at times may closely simulate meningeal tuberculosis."

In such cases it is easy to overlook small consolidations. Such consolidations are usually found in the croupous type and in either apex. (Webster).

Then we have the abdominal type, where early symptoms may simulate a sharp attack of appendicitis, or even intestinal obstruction.

Just as a differential diagnosis between tuberculosis and cerebro-spinal meningitis in infancy is sometimes practically impossible upon the basis of the clinical symptoms, so is a differential diagnosis between lobar and lobular pneumonia, sometimes, in early life, unattainable by means at our command.

A broncho-pneumonia of long duration in

children is apt to be regarded as a tuberculous process.

The appearance of miliary tuberculosis in children may have been hastened by debility incident to pneumonia, or it may be that the cough and congestion may have promoted the resolution of cheesy pulmonary nodules, liberating tubercle bacilli. (Cotton).

Acute miliary tuberculosis of either the pneumonic or typhoid types, if the child survives many days, is almost sure to show meningeal symptoms.

Tuberculous bronchopneumonia in children is often more acute than in adults. It may occur not only during the height of the original disease, but as well in the midst of convalescence, and the patient may succumb in a very few days apparently from ordinary bronchopneumonia. Or, the child may improve after one or two weeks of acute illness and then gradually decline with progressive loss of health and strength.

The treatment of the two conditions is essentially the same in the majority of cases. The handling of the two types, sometimes, requires very different if not opposite methods.

The cure of pneumonia results from the destruction of pneumococci, where these germs are the etiologic factor in the lungs and in the blood.

This is accomplished by phagocytosis and also by extracellular processes.

In either type we have, 1st, essentially a local growth with a tendency towards a stasis of blood.

Much of the seriousness of the disease is due to the mechanical effect of the congestion, checking circulation and aeration of blood. The lungs are too crippled to eliminate properly. Poisons which are normally eliminated through the lungs, or are destroyed by oxidation, remain to oppress the body. Outside the general management of each individual case, 1st, we must relieve the congestion, and each physician may have a different way of doing this.

2nd. Stimulate the specific phagocytosis, lure the leucocytes to the battle front.

3rd, Prevent exhaustion. Especially must this be done in bronchopneumonia.

Symptoms must be relieved as they arise. Drugs intelligently prescribed do good, but when ordered carelessly or according to an unreasoning routine, much harm may be done. How to kill bacteria without injury to the little patients, or how to increase the nutrition of the phagocytes so as to render them still more efficient, is a problem I shall leave to the discussion. Perhaps some one will tell us how to treat pneumonia in children accurately as well as scientifically.

LOBAR PNEUMONIA.*

By BURNETT W. WRIGHT, Bowling Green.

As an inspiration to flights of rhetoric and literary gymnastics, lobar pneumonia is a distinct failure, but as an example of the necessity of committing to memory certain distinguishing characteristics of each and every affection with which we deal, learning to recognize them as we do the faces of our friends, this disease is to be commended. Without these fundamental facts clearly fixed in mind the diagnosis of lobar pneumonia is a guess and a hazard, as is true of many other conditions and the object of this paper is to review and emphasize with as little elaboration as possible, those signs and symptoms which lead to a correct interpretation of the pathology present. To the pathologist, this appears to be putting the cart before the horse, since pathology produces symptoms, but to the internist, called upon to make a first-hand diagnosis in the sick-room, the discovery of a group of classified signs and symptoms affords satisfaction enough to justify the retrograde procedure. The student in college soon learns that certain symptoms invariably answer certain pathological questions, while the practitioner frequently finds it a difficult matter to recall pathology that will fit the symptoms. I shall, therefore, attempt briefly to describe the signs and symptoms common to a typical case of acute lobar pneumonia, with some reference to its differential diagnosis.

In its relation to the inflammatory conditions common to the chest, pneumonia must primarily be distinguished from those affecting the serous membrane investing the lungs, namely, pleurisy in all its forms, and recognized as a disease of the pulmonary substance or parenchyma of the lungs. The question is at once raised as to what constitutes the true parenchyma of the lungs, and it should be answered that it refers both to the terminal bronchioles and the air-vesicles with their lining membrane. This membrane is peculiar for its tenuity, its absence of mucous follicles and by a change of epithelium from the cylindrical and ciliated to the squamous variety, and is the site of the inflammation in the first stage of pneumonia. The bronchial mucous membrane differs materially, both in structure and function, permitting a limitation of the inflammatory condition in bronchitis of the larger tubes, without an extension into the parenchymatous structure of the lungs and vice versa.

Developing in the course of some other pulmonary disease, lobar pneumonia may be more or less limited, but when it does not oc-

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cur as a complication of a previous affection of the lungs, it, as a rule, affects at least an entire lobe. In the large majority of cases the condition is acute, but it does occur in a chronic form and chronic lobar pneumonia might more properly be applied to those cases in which resolution is delayed with a solidification present for several weeks after the crisis should have occurred. Occasionally the exudate fails to liquify, takes on a fibroid change and the solidification becomes permanent.

In order to more clearly appreciate the relative value of diagnostic signs and symptoms and to facilitate the physical examination of a patient, it is an excellent rule to follow some fixed order of procedure, such as inspection, palpation, percussion, auscultation and mensuration in the order named and this plan is used in the following description.

Inspection: It is from this often neglected and poorly cultivated method that the physician can frequently gain the most knowledge and certainly the greatest personal satisfaction. To have eyes that really see is a blessing afforded few men, but the faculty can be cultivated and intensified to a marked degree if conscientiously exercised. One should not depend on this alone for his diagnosis, since snap diagnoses are frequently false ones, but he should not be unmindful of the many valuable ideas that may be derived from a close observation of a case of pneumonia. The apparent age of the patient is at once observed and it should be remembered that as a predisposing cause, age ranks first. Three periods of life show the greatest liability to the disease, early childhood; 20 to 40; and after 60 years of age. It is a mistaken idea that lobar pneumonia is rare in childhood and old age. Loomis says that lobar pneumonia is five times more frequent in the first two years of life than in the whole succeeding eighteen and that nine-tenths of all deaths after the 65th year are caused by lobar pneumonia. It has been met with in the new-born. What is true is that lobular or catarrhal pneumonia, as a primary condition, is very frequent both in children and the very old and in its acute form is practically never encountered in young adults and the middle aged. In adults, this type usually runs a subacute or chronic course. In middle life, the proportion of males to females with lobar pneumonia is 3 to 1, but in early childhood and old age they are practically equal. It has been known for a long time that the disease is more prevalent among the poor and malarial subjects, especially those with an aestivo-autumnal infection, are very susceptible. The significance of cold, trauma and season as predisposing causes

should be remembered, while a history of one or more previous attacks is especially suggestive, as this disease is the exception to all rules of immunity and individuals have been known to have as many as ten or more attacks. The crisis is undoubtedly from the production of an autogenous immunity which unfortunately is not only of short duration, but departing, leaves the individual more susceptible than before. Summed up, the question of the immunity to lobar pneumonia is one of individual resistance against the virulence and amount of the infection. The bacterial cause we may consider omnipresent and repeated attacks must be blamed on damaged lung tissue of subnormal resisting power, until more definite knowledge is available.

The position of the patient is frequently suggestive, as he usually lies on the affected side. This not only renders the pain less acute, but permits of more comfortable respiration through the unrestricted movements of the sound lung. Because of having to carry on the functions of itself as well as its fellow, the overworked sound lung occasionally becomes emphysematous and expiration is interfered with. When this occurs, there is a more or less characteristic expiratory grunt, the consummation of a voluntary effort to empty the lung, rather than the expression of pain. The pain of pneumonia is most acute on inspiration and the contraction of the facial muscles will indicate its presence with each intake of the breath. It should be remembered that inflammatory conditions involving only the parenchyma of the lungs are not accompanied by pain, so that in the occasional cases of central pneumonia it may be entirely absent, because the pleura is not involved. Pain in the chest, intensified by respiratory movements spells pleura. The pain in tubercular pleurisy may precede the chill, or pain may be present and the chill absent, while in pneumonia the appearance of pain is nearly always after the initial chill, is intensified by coughing, sneezing and inspiratory movements and is frequently located beneath the nipple of the affected side. A patient seen after the fourth or fifth day may not complain of pain, as it frequently disappears by that time, but 85 per cent. of all cases give a history of it in the first of the attack.

The initial chill of this disease is more or less distinctive in its constancy and severity. The majority of cases date their beginning from it and its abruptness and intensity are quite characteristic. Malarial chills occur with clock-work regularity, their frequency depending on the type of parasite harbored, but never at night, while the chill of pneumonia frequently awakens the individual

from an otherwise normal sleep and as a rule is not repeated during the course of the disease. I know a politician who was interrupted in the midst of a campaign speech by a violent rigor of a beginning lobar pneumonia.

The expression is often a valuable adjunct in locating the pathology of an acute febrile condition. Abdominal troubles are usually characterized by drawn features, livid skin, deeply drawn lines and sunken eyes, while pulmonary conditions, as in lobar pneumonia, exhibit a flushed face, with the skin a bright red over the cheek bones and the eyes bright and sparkling. The flushing of the face on the affected side is rather constant, so much so, that in the old days it was customary to blister the chest on the same side with the flushed cheek. In all probability this redness is the result of lying for a long time with one side of the face to the pillow.

Herpes labialis is a diagnostic aid as there are but three febrile conditions in which it is at all common, namely, pneumonia, meningitis and malaria. It may vary from a closely aggravated set of pin-head-size vesicles to large yellowish or brownish crusts upon the skin. It is very likely the result of a mild toxic neuritis of the terminal nerve filaments and usually disappears in seven to ten days.

Cough is present in over 90 per cent. of all cases, the only exceptions being in the very old and occasionally in very young children. Just before death the cough may be entirely absent, and a sudden stoppage before the crisis is often a bad prognostic sign.

The sputum is of some value, but not nearly so much as we have been led to believe. The classical brick-dust or rusty variety occurs only when there is an admixture of blood and in the first 48 hours it is often nothing more than a frothy mucus. Often it is a creamy yellow and in alcoholics with pneumonia it takes on a deep brown or prune-juice color. Just before death a greenish tint may be noticed. What is of especial significance is its tenacity, which is so marked that a cup containing it may be inverted without spilling it, and the difficulty of expectoration as a result of this tenacity is a source of great annoyance to the patient.

Pneumonia, more than any other acute disease shows a constant increase in the respiratory rate. It is not unusual to find the patient breathing 50 to 60 times a minute and it is said that expansion of the nostrils is a diagnostic sign of some value in children. The pulse rate in most acute diseases bears a more or less constant ratio to the respiration, but in pneumonia it is correspondingly slow. One may see an adult breathing at the rate of forty or fifty a minute with a pulse no more than a hundred. This respiration is more of a panting and is made voluntarily

shallow because of the pain accompanying deep respiratory movements.

Dyspnea may be the first symptom to attract attention by forcing the patient in an upright position in order to breathe. It has no relation to the amount of lung structure involved as a double pneumonia may cause less discomfort than when a single lobe is affected. It is perhaps, most marked in those cases accompanied with marked nervous depression. It is not always present however, as the very old rarely complain of difficult breathing regardless of the respiratory rate. In children the most marked dyspnea occurs when one or both apices are involved.

Finally, inspection reveals the apex beat in its normal position, (unless displaced from an old cardiac condition) and an absence of bulging of the interspaces. Neither of these conditions maintains in a pleural effusion; the former when it affects the left side.

Palpation. The skin, as a rule feels dry and hot, but occasional cases have a profuse perspiration throughout the course of the disease. In the congested stage, there is a slight increase in vocal and tactile fremitus over the affected lung, which becomes more marked as the solidification advances. It is most marked during the stage of red hepatization, gradually diminishing as resolution occurs. It should be remembered that both vocal and tactile fremitus are normally more pronounced on the right than on the left side and both hands should be placed on the chest one over the affected and one over the sound lung, when eliciting it. It is frequently easier to feel the diminished expansion of the affected side than to see it and the patient should be instructed to cough before tactile and vocal fremitus are determined, in order that the larger bronchi may be cleared of mucus that might interfere with the transmission of vocal vibrations. Palpation also confirms the location of the apex beat and determines the quality and character of the pulse. The pulse during the chill is usually small and easily compressed, but in the febrile stage that follows, it becomes a full, bounding pulse which is more or less characteristic of pneumonia. As solidification advances, the amount of blood passing through the lungs to the left ventricle is progressively less and the pulse becomes smaller and weaker.

Percussion. Tympany and dullness over the affected areas are the essential elements of percussion in this disease, the former (Skoda's resonance) in the beginning and end and the latter during the well-developed stage. The following exceptions, according to Cabot, are sometimes met with and are worthy of mention:

(1) In the pneumonias of children and oc-

asionally in adults, dullness may be absent.

(2). When the lower lobe of the left lung is affected, a distinctly tympanitic quality may be transmitted to the consolidated area from a distended stomach or colon.

(3) In central pneumonia there may be no change in the percussion note, or it may be unusually full and deep so that the sound side seems dull by comparison."

It is well to percuss over the sound lung first, alternating with a corresponding area on the affected side, and to an experienced examiner, the sense of resistance to the percussing finger is of equal value to the character of sound elicited. Wintrich's phenomena is of value when present and is found most in involvement of the upper lobes. The upper lobe, when solidified, transmits its dullness to the front of the chest; the middle, to the axilla and the lower to the posterior axillary line.

Auscultation. In the beginning may reveal nothing more than a suppression of the normal vesicular breathing. This is a relative difference and can only be determined by comparing with the breath sounds heard over normal lung tissue in the same individual and finding them diminished over the affected area. What has been considered by the older writers as pathognomonic, but is now known to be absent in certain well developed cases are crepitant rales, which are produced by the expansion of air vesicles containing a sticky exudate. They occur at the end of inspiration only, are fine and dry and resemble the sound produced by throwing salt on a fire. They are more abundant during resolution than in the beginning of the disease when they receive the title of "crepitans redux." Tuberculosis, pulmonary edema and hemorrhagic infarction of the lungs, may show the crepitant rales and occasionally in the beginning of a dry pleurisy the sound may be heard around the site of the inflammation. When solidification occurs to the extent of excluding air from the vesicles and bronchioles, the breathing becomes tubular. In the beginning, the sound is a soft, low, piping note, heard on expiration, but as solidification advances with a corresponding increase in the intensity and rate of respiration, it becomes loud and harsh and is heard both on inspiration and expiration. It is but a reproduction of the laryngeal and tracheal sounds transmitted through the solidified lung tissue and voice sounds and the expiratory grunt are very marked over the affected area. Certain cases of massive pneumonia, in which the larger bronchi may be completely occluded, may not reveal tubular breathing.

Mensuration. Is occasionally used to dem-

onstrate the increase in size of the affected side.

SUMMARY.

I shall borrow again from Calot, who says, "In a typical case, one finds (oftenest at the right base behind)

1. Dullness on percussion.
2. Increased tactile fremitus and voice sounds.
3. Tubular breathing and occasionally crepitant rales.

These signs occurring in connection with fever, cough, rusty sputa, pain in the side, dyspnea, herpes and leucocytosis are sufficient for the diagnosis."

DISCUSSION.

Phillip Barbour, Louisville: I think we ought to congratulate ourselves on having heard two papers which are as full of meat as those we have heard. I desire to discuss particularly Dr. Martin's paper, and what I have to say will be mainly upon that part of the two papers.

I have often thought it would be a good thing for us if bronchopneumonia did not have a pain stage. We are so apt to think of broncho-pneumonia and pneumonia as having pretty much the same kind of pain. Dr. Martin laid emphasis upon the fact that these two diseases are so different in their causes, in their pathology, and in the results. Pneumonia of the lobar type is essentially the formation in a lobe of a fibrous mass that is firm and hard, so hard that it is cut with difficulty. The red blood and white corpuscles and the exfoliated epithelium from the air cells are bound together by the fibrin, so that you can pick out the plugs with a needle. Bronchopneumonia is a disease in which the catarrhal element is a great feature. Here you have the lungs filled in with a catarrhal deposit, as well as a quantity of exfoliated mucus. A child with lobar pneumonia has a pretty good chance to get well. The mortality of pneumonia in adults is sufficiently bad, as we all know; but the mortality of lobar pneumonia in young children is not over five per cent., and most authorities put it at one or two or three per cent. A child with a deposit of fibrin in the lung, and with a heart strong enough to pump blood through the rest of the lung, will live through a lobar pneumonia; but take a child with catarrhal or broncho-pneumonia, with every bronchus and bronchiole filled, more or less, with mucus, and that child will die because it will strangle to death with its own secretion. I have often sat by the bed of a baby with this form of pneumonia and have wished I had an instrument which would enable me to blow the mucus out of the bronchioles, so that the child would get well, and it would if the mucous material could be gotten rid of in some way.

I think the diagnosis of pneumonia and of broncho-pneumonia in children is oftentimes difficult. I remember my late Professor of Pediatrics once coming in to see a child. He looked at it and said pneumonia without examining the child. The child was not suffering from pneumonia; it had a distended stomach and pressure of the distended stomach upon the diaphragm made the child breathe rapidly, and he made his diagnosis on the rapidity of the respirations. Ordinarily, we make a diagnosis of pneumonia by the ratio between the pulse and respiration. You may be deceived for a few hours on account of a distended viscus, but only a few hours. Any child with pneumonia will have a ratio between the pulse and respiration of one to three or four, that is, the pulse will be 120. When a child has bronchopneumonia or lobar pneumonia, if the spot is no larger than the palm of the hand, the respiration will jump up to one or two or possibly more. If you count the pulse and respiration you will often be misled in the diagnosis of pneumonia.

One essayist spoke about the expiratory drum. We see this much more frequently in children than in adults. The explanation of it you have probably accounted for yourselves. If you hold the breath for a moment and then let it out, there will be a little grunting. In pneumonia there is delayed expiration. If pneumonia involves the lungs to any extent at all, there is going to be a loss of the normal elasticity of the lung. There is bound to be. The elastic tissue, which makes up the interstitial tissue of the lung, is involved in pneumonia, so you have delay before expiration occurs.

Henry E. Tuley, Louisville: I am sure, we have all enjoyed these two papers, because they have brought to our attention diseases which we surely see a great deal of, and diseases which we are never free from.

I was particularly interested in Dr. Martin's paper on pneumonia in children, because there are a great many points he has brought out, and others I wish to mention, that we ought to think of continually in the diagnosis of this condition in children. One of the points which I would particularly wish to emphasize is the difficulty, as Dr. Parbour brought out, of making a diagnosis of pneumonia. I think one reason for this is that frequently we are too prone to do away with the stethoscope in the examination of the child's chest. Take an infant up to a year of age, it is absolutely impossible to examine that child's chest throughout with the ear. It is very essential that you use a small bell stethoscope that will cover every area of the child's chest. This is particularly true in areas of consolidation, especially in the infra-axillary region, where it is impossible to get the ear because of the distance between the back of the head and ear. Given a case of central pneumonia with de-

layed transmission of the sounds gradually working its way to the surface, except for the clinical signs, you would not make a diagnosis for several days until the bronchial breathing was heard, and if this localization was in the infra-axillary region, it would not then be heard without a stethoscope.

I would specially emphasize the importance of having the child stripped and use the stethoscope in making the examination. One of the most frequent of the valuable diagnostic signs, which is not ordinarily thought of, is the absence of respiratory murmur over the consolidated area. I have often, when I attended the lectures of the late Dr. Page in New York, years ago, noticed how frequently he would use the expression, "nothing is so eloquent as silence in the examination of the chest." The absence of respiratory murmur which you get in the early stage of pneumonia in a child will surely be followed by signs of pneumonia. The frequent absence of dullness in consolidated areas in a child can be explained because of the preponderance of the bronchial element in the child's chest and the child's lung and thinness of the chest wall, and the ease with which the normal note of the chest is transmitted from one area to the other. It takes very keen and careful percussion methods to elicit the proper signs of a pneumonia in a child's chest.

One of the essayists mentioned the association of meningeal symptoms with apical pneumonia. In my experience that has not been true. I do not believe that apical pneumonia is more likely to be associated with meningeal symptoms than pneumonia situated anywhere else. It is not the place where the pneumonic process has developed, it is due to the toxemia which is developed in a case of pneumonia whether located at the base, the apex or any other part.

It has not been my experience to see very many cases of typical crises in bronchopneumonia. I do not believe that typical bronchopneumonia ends by crisis. It is usually a long drawn out process.

I was glad the essayist mentioned the phenomenon of delayed resolution in pneumonia, for that is not at all an uncommon condition, and one fraught with a great deal of anxiety to the physician and danger and risk to the child. Delayed resolution is not uncommon in a child from ten to eighteen years of age. This is particularly true of the lobar pneumonia type. I recall a patient twelve years of age, where there was bronchial breathing and just as much dullness at the end of six weeks as at the time the child was taken sick. Gradually it cleared up, but it was a source of anxiety. There were no pathognomonic signs except the pure type of bronchial breathing.

Capillary bronchitis is a term which I think we ought not to use. It is broncho-pneumonia

because of the anatomical nature of the tissues of the child. Capillary bronchitis is really broncho-pneumonia because of the extension of the catarrhal process out through the bronchial tubes into the parenchyma.

Leon L. Solomon, Louisville: I think every man finds interest in a discussion of the subject, "Lobar Pneumonia." I am free to declare, it is the one disease, which always brings to me a certain sense of fear and trembling, notwithstanding the fact, in a large number of cases, we are blessed with the so-called "mild type."

During the winter of 1893 and the spring of 1894, there visited Kentucky, and, in particular, Louisville, a type of pneumonia which, no doubt, is still clearly remembered by many of us. In this epidemic, practically all of the patients died. If Dr. Clint Kelly were present, just now, and Dr. Hendon was in this hall, they would recall deaths, at the City Hospital, in the medical wards, white and colored, male and female, that ran into the double numbers, by day and by night. Patients, in this epidemic, died before a diagnosis could be made. Convalescents in the wards, recovered from other diseases, and ready to go home, were stricken and were dead, within twenty-four to thirty-six hours, the diagnosis, often not having been made, until autopsy revealed it.

Lobar pneumonia is the one ailment, which we seem to have with us all the time, no season of the year being free from isolated cases. It is the one ailment, in which the profession has, within the past twenty years, done little, if anything, to improve the character of treatment. The diagnosis, usually simple, where inspection, palpation, percussion and auscultation are carefully employed, and where certain fixed clinical signs are demonstrable, I have found, very difficult, in many cases. I have seen men, women and children in my own practice, and in the practice of my friends, where it was three, four and even five days before a diagnosis was possible. In these cases, not infrequently there is a minute focus of infection, bringing about distinct general signs of prostration, and yet no one single sign or number of signs, available, to make the diagnosis clear. I believe lobar pneumonia offers to us, as investigators, a larger field for improvement in treatment, than any one of the other acute diseases.

I might relate, that, during the winter of 1893, when the epidemic occurred, to which I am now referring, Dr. Clint Kelly was teaching Theory and Practice of Medicine, as well as Anatomy, at the Louisville Medical College. A patient was brought into the amphitheatre of the City Hospital, wildly delirious. He had reached Louisville on a through freight "fruit train," from New Orleans, as we afterwards learned from the history. I recall the weight and significance of Dr. Kelly's words, when he said to the class, in connection with this case, "I am unable to make

the diagnosis; in all likelihood, by to-morrow or the next day, the diagnosis will be plain; possibly it will be made plain for us only in the autopsy room, where so many diagnoses have lately had to be made." It proved to be a pneumonia, the man was one of the few patients, —(a big, robust youngster in his early twenties), who recovered. That was the time, when we were first beginning to think of serum, as a therapeutic agent, to be generally applied, in the management of certain definite, acute diseases. There was no stock serum in those days, purchasable at a drug store, as is the case to-day. Vaccines were unheard of. I determined to make my own serum. I was aware, that I was taking a chance, so I first swore my nurse to secrecy, Miss Buckler was her name,—a Canadian girl, of good poise and an abundance of nerve. She agreed not to tell on me, in any event, even if things went wrong. Accordingly, certain crude utensils were improvised by us. Our technique had regard for the known rules of sepsis, and, in particular, for antisepsis. We (the nurse and I) bled our patient,—the young man who had succeeded in recovering from this most vicious type of pneumonia. The procedure took place behind closed doors. Corpusecular elements were allowed to separate (in crude fashion) from the serum; we were now ready for our victim, whoever he might be.

Fortunately for me and for my experiment the next case admitted, was a pneumonia. Unfortunately, the patient a chronic drunkard, whom I had known personally on the streets of Louisville, for many years, and always alcohol soaked. Surely, he will die I thought, from such a disease, and, in such an epidemic, but he did not die. He made a miraculous recovery, the credit being due to my improvised serum. This patient received 20 c.c. of blood serum, prepared from a recently recovered case, by Miss Buckler and myself. In his case, crisis occurred, within less than twenty-four hours, following the use of serum. So far as I am aware, this is the first time, that serum (human) was ever administered, successfully, to combat a lobar pneumonia. In closing, I want to say, that under my observation, crisis in pneumonia has more frequently occurred on the fifth, sixth and seventh day, than on the ninth.

W. W. Anderson, Newport: I just want to call attention briefly to a few points made and to amplify them in reference to these two excellent papers.

One of the essayists calls our attention to a sense of resistance under the percussion finger, and I would like to emphasize that he mentioned it as of use in determining small areas of deep consolidation. In any case of acute inflammation of the lungs or the beginning of a chronic inflammation, while it is still in the early stages, you will find resistance just as exactly as you find it over the inflamed appendix or the gall-

bladder. Of course, the resistance is not so easily palpable as over the long muscles in the abdomen; but Pottenger has called our attention to the value of resistance, as determined by light palpation as a diagnostic symptom, which you will find highly useful in tuberculosis of the lungs. There are resistance areas in the presence of the beginning of any inflammation.

Furthermore, I would like to emphasize a remark made by one of the essayists with reference to cough in this respect; do not look for cough as an important symptom in persons of impaired nerves or mind. Among the insane, the feeble-minded, the idiotic, and so on, do not look for cough, for you will be frequently disappointed. Cough is a reflex answer to the irritation of the disease, and these persons with low mentality, or low physical condition, do not respond to reflexes readily.

Little or nothing has been said on the subject of treatment. I will not tell you how to treat pneumonia, but just one word of warning which would seem to be of some use. Let us not depend upon alcohol or emetin. It is of no value in pneumonia. Dr. Cabot, of Boston, who carefully tested one dozen cases of pneumonia, giving every second case a small allowance of alcohol as a part of the treatment, and the alternate cases the same line of treatment without alcohol, found that the mortality of the individual who had alcohol was 41 per cent. higher. Unfortunately, there are still physicians who seem to think that alcohol is a useful remedy in pneumonia.

One final word. Let us watch the heart. Pneumonia patients who succumb, as a rule, die from a condition of the heart. Post-mortem will show the right heart greatly distended and engorged, unable to pump against the condition in the consolidated lung. Let us watch the heart in treating them. Let us not, especially in little children, force them to take disagreeable drugs which produce a bitter struggle every time we give medicine. So far as I know, the drugs we give are so little used that it is not worth the fight and the strain upon the heart ought to be avoided. Digitalis in this respect is very useful.

G. J. Hermann, Newport: Both of the essayists seem to have brought out the point that there is quite a difference between the two pneumonias, the lobar and lobular.

Microscopically, what do we find in a lobar pneumonia? It is really not a pneumonia. You have an exudate, but you have no true inflammation of the air cells; you have the fibrin, the white blood corpuscles and the red blood corpuscles thrown out into the air cells. It should really not be classified as a pneumonia. It is really a disturbance of the vasomotor apparatus controlling the circulatory system. That is the reason you have your crisis.

There is no other disease in which the prog-

nosis is so good as in a lobar pneumonia if you will follow up the heart and use digitalis. Digitalis is as near a specific in lobar pneumonia as you can find in medicine. While it may have no effect upon broncho-pneumonia, it does shorten and bring about the crisis earlier in lobar pneumonia, and the lobar pneumonias show that they are not in truth pneumonia. There is no proliferation in the cell wall itself. All disturbance is in the air cell and points to disturbance of the circulation.

As to broncho-pneumonia, it means nothing unless we have a defining adjective. To us broncho-pneumonia does not convey a very lucid explanation of the condition of a man's lung. Broncho-pneumonia must have a defining adjective. Such pneumonias are streptococcic, staphylococcic, influenzal, or they are due to whooping cough; they follow diphtheria or scarlet fever. They may be tubercular, and the prognosis of all bronchopneumonias depends altogether upon the infection. That, I believe, will explain the terrible mortality in those cases seen at the City Hospital to which Dr. Solomon has called our attention. There was some virulent infection which produced these pneumonias, and the term pneumonia meant nothing unless they were able to find out the real adjective or the real infection cause.

Leon L. Solomon: The gentleman misunderstood me. These were not cases of broncho-pneumonia, but cases of lobar pneumonia.

I. A. Shirley, Winchester: I want to say a word in reference to the statement made by Dr. Solomon that in a certain epidemic of pneumonia patients nearly all died; in fact generally before a diagnosis could be made save by post-mortem examination; now while I frankly admit the above is a good, reliable and safe way in which to make a diagnosis it is rather an embarrassing one and not always satisfactory to the patient. Allow me to suggest that if a similar trying ordeal should arise that instead of turning to the professors of practice and clinical medicine as well as to those of materia medica and pediatrics for help that he send to the country for a level-headed general practitioner whose specialty is the skin and its contents, who can and will make a diagnosis.

E. Duff Burnett, Anchorage: In reference to the paper on pneumonia in children, there is one point that occurs to me that has not been mentioned. So many of these cases have been diagnosed by some mother before we see them, therefore it is not necessary to go into details in reaching a diagnosis in the majority of cases. The principal thing is to get busy, see that the patient gets well if possible. The prime consideration is support. Most of the rank and file care for their little ones as they did years ago. We should teach the mothers to keep these little ones dry and thus reduce the possibility of

infections. They should have dry diapers and dry shoes; they should be taught the daily use of the nasal douche and the throat wash as well as the tooth brush. Such a line of prophylaxis seems to afford greater hope for these little fellows than any treatment which can be employed after the disease has developed.

The President: Dr. Martin sought to bring out a discussion along the lines of treatment.

W. F. Boggess, Louisville, was asked to take part in the discussion. He said:

I have not heard these papers and I do not know what line the authors have assumed.

After all, our treatment of pneumonia resolves itself into some very simple, practical efforts at handling it. I am inclined to think the country doctor gets incomparably better results in his pneumonia cases than we general practitioners do in cities. Again, I believe the country doctors know just as much about the treatment of pneumonia as we do.

Just a word or two of matters that may be of some interest. I am of the opinion the first thing is plenty of fresh air, which is something you get in the country, and which we do not always get in the city. The patient should be in a room well ventilated, with all the windows open even in winter time. Some years ago we had a patient brought to the City Hospital with double pneumonia, temperature 105, pulse 140, respiration 60, and it looked as if he was going to die. It was a cold, slushy winter night. I had him put under a window awning, and the next morning, instead of finding him dead, as I expected, when I raised the awning up I found he was much better. He slept splendidly, and said if the snow had not been blowing in his face all night and keeping him awake, he would have done much better. That patient recovered from being out in the open air under an awning. That is one thing we should not overlook.

Another remedy I like in pneumonia is the carbonate of creosote. I believe in the carbonate of creosote we have a remedy that is of great value. I have used it for a number of years, and particularly in the pneumonias of children. I think the effects of carbonate of creosote are oftentimes marvelous. To adults I give it in thirty, forty, and fifty drop doses. I use creosotol, the imported carbonate of creosote, because it has less free creosote than the domestic products, and I give it in forty or fifty drop doses every four hours. You have a safeguard in the administration of your creosote by watching the urine. Whenever you find the urine is getting a little blackish, you should stop the creosote or lessen the dose. But, I am quite sure I have saved many lives with it, and particularly is the result of the creosote marvelous in the pneumonias of the aged and in young children.

Then another remedy along specific lines is the question of using vaccines in pneumonia. I

do not think we have a vaccine or a serum that is a specific for pneumonia; but I do know the majority of the pneumonias we see particularly in town are not the plain, frank pneumonias, but they are the mixed infection pneumonias. We do not often see the typical, old, frank pneumonias I saw when I was a boy and that you see in the country. We get our pneumonic infection plus staphylococcic, micrococcic, and other bacterial infection, consequently most of our pneumonias are mixed infections, and, I am sure, by giving to these cases some of the various combined vaccines, particularly the mixed catarrhal vaccines, or Van Cott's, you will get positive benefit in many cases. I go into a pneumonia case with the vaccines with very much more confidence than I used to under the old line of treatment.

Then comes the question of support of the heart. Most of our cases of pneumonia die from right heart involvement. There are many cases of pneumonia whose lives could be saved by bleeding freely, as was practiced by our forefathers. There are certain types of cases where bleeding is beneficial, and when the right heart is laboring and the patient is cyanotic, especially in a case of a big, plethoric, robust fellow. That is the patient who usually dies. The bigger and more robust they are, the harder it is to handle their cases because the more work the right heart has to do. I think bleeding sometimes is good in such cases.

Digitalis is another remedy that we must use in cases of pneumonia. There comes along a case every now and then when the right heart is tiring, and the left heart is beginning to go back on you, where digitalis can be used with benefit and should be used, and you must judge the amount of digitalis you give, and the frequency with which it is given, by its effect and the character of each individual case. There is no question but what digitalis should be used in some cases of pneumonia and can be used with positive benefit. Sometimes it is necessary to give strophanthin. I have seen it, when given hypodermically, bridge the patient over the crisis and carry him through with a heart that has seemingly threatened to fail every moment.

Strychnia is another remedy. I think we make mistakes in not using these remedies until the heart has become so involved that they are not of much value. I think that in many of our cases, strychnia, administered hypodermically, two or three times a day, in doses of 1-30 gr. before it is absolutely needed, will bridge over the crisis. So with digitalis. Don't wait until the heart is so involved that the right heart is practically paralyzed before you begin to use digitalis and other heart stimulants.

J. T. Reddick, Paducah: So little was said regarding the treatment of pneumonia up to the

time Dr. Boggess made his remarks, that I desire to say a few words.

I want to commend what Dr. Boggess said regarding the use of carbonate of creosote. It is specially advantageous in the treatment of the aged and the infant, and take the cases of the plethoric, those with a full bounding pulse, I think veratrum is especially valuable in such cases. A favorite combination of mine is veratrum, old fashioned sweet spirits of niter, and solution of acetate of ammonia, which are febrifuges. They act upon the skin and kidneys, in fact are eliminators, and when used in conjunction with veratrum make an excellent combination.

Just a word more in cases of delayed resolution. Where the lung fails to clear up properly and the case begins to assume a somewhat chronic course, there is nothing in my opinion better than the iodid of ammonia.

I simply mention these things because so far they have not been referred to in connection with this subject. I desire also to emphasize the importance of ventilation; give the patient plenty of fresh air—oxygen is of prime importance in all cases of pneumonia. Take care of the heart, avoid all depressing remedies, stimulate when necessary; carbonate of ammonia with port wine as a vehicle, may tide the patient over the crisis. Treat the patient, not the disease. Every individual sick with pneumonia is a case unto itself. Avoid frequent, disturbing examinations, have the patient refrain from talking as much as possible.

Arch Dixon, Henderson: I would like to emphasize what Dr. Boggess has said. His ideas in regard to ventilation, it seems to me, strike the keynote of the whole treatment of pneumonia. In years gone by I think most patients with pneumonia were doped to death. They were given expectorants; they were given carbonate of ammonia; they were given something every two or three hours and had no chance to get rest. They were drugged to death.

The treatment of pneumonia, resolves itself into measures which (1) reduce the volume of blood in the lungs, (2) those which reduce the fever; (3) those which alleviate the disturbances of the brain and of the nervous system and, (4) those which support the nutritive processes of the body. In the development of the treatment advanced opinion seems to have settled upon ventilation and cold as the two agents which more than any other practically meets the above indications, viz., reduction of pulmonary engorgement and its power to lower the high temperature which almost invariably accompanies this disease—by its well demonstrated power of contracting the calibre of the blood vessels and of allaying and dissipating the local fulness and infiltration of the lungs.

The judicious application of cold water com-

presses adapted to the therapeutic indication of each case, is perhaps the most efficient single aid to the organism in the battle against the diplococcus infection. The action of cold water is, in this disease, the same as has been demonstrated as beneficent in typhoid fever, the difference being due to the more feeble resistance of the diplococcus to temporary reduction, which enables us to avoid prolonged or heroic procedure.

The all-important truth to-day is that croupous pneumonia at least is a self-limited disease which cannot be cut short or cured by any known means. If you will bear this in mind you will reduce its mortality. **The present, like the past mortality of this disease arises from the search for specifics and too active medication with new remedies.** The lesson is to treat the patient and not the disease, to enhance his resisting capacity, to fortify the patient against toxemia. In pneumonia the life and death process of the rapidly multiplying diplococci evolve certain toxic materials which menace the central nervous system, the heart, and the excretory organs. Bear in mind that this is the chief lethal factor, and not the crippling of the lung. That this is true may be noted by the condition of a patient before the crisis ensues, when his life seems to be ebbing away, his temperature high, pulse rapid, face cyanotic, and gasping for breath with distended nostril. All this is changed after the crisis is established. He may be depressed still, but he is not distressed; temperature, pulse, and respiration are almost normal, despite the fact that the affected part is still impervious. The diplococcus infection has reached its natural termination; the manifestations of pneumonia due to the latter have ceased, but the lung being filled with exudates, is still crippled, and yet the breathing is but slightly embarrassed. Nature has accomplished a miracle which human ingenuity with all its boasted progress has failed to imitate.

In pneumonia considerable time is required for the lung to resume its natural healthy condition after the serious manifestations have ceased, and great care must be exercised to save the heart sudden exertion during convalescence.

In the management of pneumonia the chief element is strict attention to the minutest detail. Give them your personal attention, no matter how well trained your nurse may be. The personal equation not rarely decides the issue of life or death. See that your patient has (1) absolute rest; that he is isolated from the family in the best room in the house under the care of a nurse. He must not be allowed to leave the bed for any purpose, all mental and physical effort must be avoided.

(2). See that the sick-room is well ventilated. In very cold weather the nurses are prone to be guided by their own sensations in carrying out the order for free ventilation. Direct them to

keep themselves warm by extra clothing; the patient is protected against taking cold by the febrile temperature, and a night-cap and blankets may satisfy the relatives on this point. There is no doubt that the free admission of fresh cold air into the sick room during the entire course of the disease neutralizes the toxemia and often prevents the heroic stimulation and oxygen inhalation which often becomes necessary in the latter days. In some hospitals patients are frequently placed beneath a window or on a veranda, or fire escape, and this is becoming frequent in private practice since it has been recently demonstrated by Northrup, Brannon, and Howland that moving cold air stimulates the vaso-motor centre by its action upon the nasal mucous membrane and the facial terminals.

(3). Diet. Throughout the whole course of the attack it is highly important that the patient receive the most nourishing food. In other words, his resisting power must receive ample support in order to repair and rebuild the textures that are rapidly disintegrating in his body. Feeding here implies the administration of food which concentrates a large amount of nutritive material in a small bulk and which requires a small amount of digestive energy on the part of the stomach and intestinal tract to utilize it.

As to medicinal treatment very few drugs are used. Unless diarrrhea exists or it is otherwise contraindicated, 8 or 10 grains of calomel is given for the purpose of cleaning the deck for action. The calomel is administered dry on the tongue and washed down with water. All the pneumococci in the mouth are destroyed by the rinsing with the calomel emulsion. Several copious stools is the usual result in six hours, castor oil or citrate of magnesia may be administered: Calomel is probably the very best intestinal anti-septic we have. All fermenting material being thus removed from the intestinal canal, the distention, which so often handicaps recovery in the advanced cases of pneumococcus toxemia, is prevented.

The mouth should be kept clean by rinsing it every hour—unless asleep—with a saturated solution of chlorate of potassium. These are the only drugs I use, as a rule. In case of a tendency to cardiac embarrassment strychnia is resorted to and is administered in 1-32 grain doses four times a day. Delirium, nervousness, twitching, picking at the bed clothes, etc., are unfavorable symptoms which tend to develop at this stage of the disease, and require watchful attention—they are usually associated with a hard dry and crusty tongue.

One of the most efficacious remedies in this emergency is the tincture of capsicum given in doses from 10 to 20 drops, and even more, in water, every 2 or 3 hours, or oftener.

In cases of sleeplessness and violent nervous-

ness 1-4 grain of morphine with 1-150 atropine given hypodermically, may be resorted to. For the relief of cough nothing serves me so well as eodcine.

P. H. Stewart, Paducah: Regarding the treatment of pneumonia and fresh air treatment, I would like to agree most heartily with Dr. Baggess; and in this connection desire to relate some early experience in which fresh air was taken advantage of in the treatment of this disease, and to record its earliest recognition.

From 1886 or 1890—(and this occurred in the State of Kentucky in the Pennyroyal District)—Dr. C. A. Elliott, of Ballard and McCracken counties presented a paper before the State Medical Association in Paducah in 1888-9, which was commented on very favorably by the late Dr. Ouchterloney. Dr. Elliott lived on the borderline between a new and old civilization. There he established a large practice in the first-class citizenship, who lived in good houses at the edge of McCracken county, and also in the recently developed part of Ballard county where the residents lived in log houses. Some of them had roofs, and a great many of them had the old chink and dobbin. There were during these years quite a number of cases of pneumonia. Dr. Elliott discovered that the mortality was always in those patients who lived in the good houses, with the doors and windows closed, while the patients who lived in the log huts, with chink and dobbin, recovered. He reported a number of cases. He would go to see his patients in the morning and found where the dobbin was out and snow had blown in on the patients the night before and could rake the snow off the blankets with his hands, those patients showed almost no mortality. He presented these observations in a paper read at Paducah, which was the first public announcement to the profession of fresh air in the treatment of pneumonia.

M. M. Collins, Lackey: I would like to speak a few words in regard to the treatment of pneumonia. In Louisville, where I graduated as Doctor of Medicine, I am glad to meet all the doctors and all of my old professors.

As to the kind of doctors we have in the mountains to treat any kind of disease, I will say that about ten years ago I got scared; I was knocked out completely. I went out West, took a Western trip, thinking I might get over my break down. I had a carbuncle between my clavicle and spinal column. It was opened. I came back here. I had preserved a great many old medical journals. I had a stock of them that nearly reached up to the first ceiling. I went and bought some books on consumption and tried to find out what was the matter in my section of the country with the people and myself, and that if I did not do so the outcome would be bad. I read everything in the medical journals in regard to the treatment of consumption, and what was best to do to

overcome the break down in this particular direction. I had ample time to study the hygienic conditions and to study the fundamental principles underlying a great many of the conditions necessary to overcome disease. I became familiar with a great many of the health resorts and with great writers on the subject. I found out a few errors from a medical standpoint. In some cases the homes and surroundings were squalid. A great many times you would be surprised to go into a home and find how little hot water was used, and how little scalding and purifying was done in these homes.

The first thing I do when I go into a sick room is to look around, take a general survey of the conditions that surround the sick person, what kind of ventilation there is, and what kind of bed he has to sleep in. I tell them to clean up and open the doors and let in the fresh air. When these things are done, it will do more good in getting rid of the sickness than anything else.

In my community I think the doctors have as good luck in the treatment of diseases as city doctors. We have as good luck as any one could wish for. For myself, I do not think any one could wish for any greater success, but what I am speaking about is the foundation of my success.

When it comes to treating pneumonia you will find cases in which you can use aspirin with great benefit. It is one of the best remedies we have to control the high bounding pulse. You can control it with mild doses of aspirin. You can also use to great advantage aconite, strychnia, digitalis, and sometimes apomorphia. A few drugs, properly used along these lines, will give results coupled with proper diet and the use of salines for evacuating the bowels. These few things, applied in the proper direction, we have the best of success with in the mountains, and any of the doctors here from my neighborhood can substantiate what I have said.

Josephus Martin, Cynthiana, (Closing the discussion on his part): Regarding the treatment of pneumonia in children, I remained silent with reference to the use of drugs. Very little was said along that line; such a thing could not have been possible twenty or thirty years ago. Dr. Boggess said very little in comparison to what he would have said a number of years ago. We may put a number of interrogation points after the question, "What is the drug treatment in pneumonia?"

I want to emphasize one statement made by one of the members, that is, in examining the lungs, whether the patient be a child or adult, the thing to do is to strip the patient to the waist, if possible.

I heartily agree with those who advocate fresh air or out door treatment. Plenty of oxygen is certainly a relief to these little patients. Many of them respond to fresh air almost immediately

and the effect is markedly noticeable in the lowered temperature and decreased restlessness and nervousness.

Those of us who have slept in window tents or out of doors, can appreciate the beneficial effects of fresh air.

B. W. Wright, (Closing the discussion): I wish, in the first place, to express my appreciation for the general discussion, and there are a few remarks I want to make in closing.

In my paper I mentioned the susceptibility of malarial subjects, particularly those with estivo-autumnal infection, to lobar pneumonia. I had the rather unfortunate experience of seeing something like forty individuals die in less than four weeks in two wards of a hospital where malaria was particularly common. It occurred in Central America. Of those forty who succumbed to lobar pneumonia, twenty-seven of them died of estivo-autumnal infection. Some had the primary condition at the time of admission, but the majority of them were there for other complaints. A number of the patients who were admitted to this ward developed lobar pneumonia. The mortality was terrific. In the beginning we were at a loss to determine the cause of the endemic. After a few post-mortem examinations the cause was plain, and it was only by removing every individual from the ward, opening all the windows, scrubbing the floors and walls, with thorough disinfection in contact with the wards or patients that the endemic was finally curtailed.

One point which should have received attention in regard to the treatment is the importance of watching the sounds of the heart as an indication for the continuation of stimulants. That is much more important than is ordinarily believed and should be borne in mind.

I cannot agree with Dr. Hermann that the crisis referred to the condition. It was too plain to my mind, that one recovers from pneumonia by developing an autogenous immunity, and I have seen that emphasized quite strongly and clearly in a number of reported cases of pneumonia. There are a number of cases of lobar pneumonia that abort spontaneously in the beginning of the disease, so much so that one individual has had as many as four attacks of pneumonia, with the presence of rales, dulness, difficult breathing, and high fever, these having all disappeared within a few days and a few hours after they made their appearance. That individual developed immunity to pneumonia. I cannot stretch my imagination enough to agree with Dr. Hermann that the crisis is purely a circulatory condition.

Quite recently a rather unique plan of treatment has been advanced by Swift of placing pneumonic patients in the upright position. I have tried this in one case, and I am able to corroborate his views in this respect, that dyspnea, expectoration and cardiac disturbances are much less with this posture.

SOME OBSERVATIONS ON BLOOD-PRESSURE IN DISEASES OF THE EYE, EAR, NOSE AND THROAT*

By J. H. THORPE, Owensboro.

In presenting this paper to this society to-night, will give my experience as found in the eye, ear, nose and throat work for the past fifteen months, and what I could collect from other men situated in various parts of the United States, thinking that location as to altitude with climatic conditions would have some part to play in this much written about and talked of condition.

For more than a year I have been using the sphygmomanometer on almost every case that comes into my office for treatment.

In acute rhinitis, atrophic rhinitis, hypertrophic rhinitis, polypoid degeneration of either of the turbinates, inflammation of the accessory sinuses, empyema of the max, or frontal sinus have not shown any disturbance in the blood-pressure. I have not had to treat a case of empyema of the sphenoid sinus, can't say what effect that would have on the pressure.

I have had one case from a clinical standpoint, it was an angio-sarcoma of the perpendicular plate of the ethmoid, which reached the point that he had diplopia, filling the maxillary antrum on the right side and beginning to fill the left, had broken each superior maxillary bone loose, with severe hemorrhages, etc., without any interference in the blood pressure at any time while he was under my care. Our diagnosis has been verified by Drs. Ray, J. B. Murphy, and Dr. Coley, N. Y., who gave him his serum treatment and he has seemingly recovered.

I have had one case of retinal hemorrhage in a patient with normal blood pressure. Five others with a pressure ranging from 140 to 225, in each of these cases we found evidence of nephritis, in three of these we found arteriosclerosis very marked.

Three cases of glaucoma, saw patients between attacks, only one case gave increase in blood-pressure.

I have had the privilege to take the pressure in eight cases of cataract, two with cataracts in both eyes, only two cases gave increase in blood pressure, one of them 76 years old had nephritis, his pressure was 230.

In albuminuric retinitis we always found hypertension. After this condition has developed to the stage where the vision becomes impaired to such an extent that it causes them to seek advice from the oculist, they seldom live but a few days or weeks.

Iritis, irido-cyclitis neuritis (papalitis).

choroiditis have not given me an increased pressure.

Conjunctivitis, keratitis and ulceration of the cornea, or in fact none of the external diseases of the eye have I found hypertension.

In the strumous diathesis in children where we find so many who have phytenule, we do not find hypotension.

In paratonsillar abscess, acute tonsillitis nor follicular tonsillitis have I found increase in the pressure.

A very slight change in acute mastoiditis, with no change in superior otitis media.

I have had one case in whom I removed a cholesteatomatous mass which had absorbed all of the mastoid cells and inner plate of the temporal bone and was making pressure on the brain without giving any increase in the blood pressure.

We often find tinnitus, dizziness, etc., in patients with hypertension, as a rule in this class of cases we have arteriosclerosis and possibly a nephritis.

Thinking it would be of interest to know each man's personal experience as given by him, I will give them in full.

Albert H. Andrews, Chicago: "I have had a number of cases of retinal hemorrhage associated with high blood pressure. In three cases at least the sight has returned almost to normal following attention to general health. I have also had several cases of tinnitus which seemed to be due to increased blood pressure, but am not in a position to give accurate data."

William L. Ballenger, Chicago: "I am sorry, but I have no data on blood pressure in diseases of the eye, ear, nose and throat, though I am using the blood pressure apparatus continuously."

Oliver Tydings, Chicago: "I regret to say I can not give you any definite information with regard to blood pressure in eye, ear, nose and throat diseases. In my work I seldom take it in ear, nose and throat work, but frequently do in eye work, always before cataract extraction, and where I have a fundus lesion or intra-ocular tension.

"I have seen hemorrhage from the choroid with pressure of a 140 and glaucoma following extraction with pressure of 130."

Casey A. Wood, Chicago: "You will find almost everything that I have to say on the subject of blood pressure in the American Encyclopedia of Ophthalmology. I have no special data."

Harry S. Gradle, Chicago: "I really have no data that will be of use to you in the preparation of your paper. I measure the blood pressure only in retinal diseases due to renal or cardiac disturbances, where we would naturally find a high pressure. I frequently

*Read before the Daviess County Medical Society.

measure all cases of glaucoma; but gave it up after proving to my own satisfaction that there is no relationship between blood pressure and intra-ocular tension."

William Cheatham, Louisville: "I have kept no official record on such cases referred to, but my experience has been in hemorrhage of the ear, nose, and throat, not traumatic, is usually associated with high blood pressure, and this usually with some renal trouble. I have just had a case of quite severe nasal hemorrhage in a man only 42 years old, with blood pressure 170 and 180."

J. M. Ray, Louisville: "It has been my custom for several years to take the blood pressure in all cases presenting themselves to me, of diseases showing in the eye suspicious arterial trouble. For instance, in all cases of glaucoma, certain cases of cataract and certain cases of diseases of the uveal tract. In the ordinary diseases of the eye which I daily treat, it has not been my habit to take the tension. The instrument I have always used is a Tykos. In diseases of the ear, nose and throat beyond a few cases of vertigo, I have not employed it. The information I have gotten from these observations has not been sufficient to make a profound impression on me as to value of blood-pressure in these diseases. Therefore I have kept no accurate record of them and am not in a position to come to any conclusion from the observations I have made."

R. C. Lynch, New Orleans: "I have not done much with blood pressure in ear, nose and throat conditions and cannot add much to your data in this direction."

Francis Ashley Faught, Philadelphia: "I regret that I have no reference studies in ear, nose and throat conditions."

C. A. Clapp, Baltimore: "In reference to data upon the blood pressure in diseases of the eye, ear, nose and throat, that it has been my observation that arteriosclerosis is responsible for a great many pathological lesions of the eye and ear but have very little to do with the condition of the throat and nose, with a possible exception of a nasal hemorrhage, the condition of arterio-sclerosis is one that is at times most difficult to diagnose and is not always accompanied with increased blood pressure. The opposite of lower blood pressure has not in my experience been responsible for any pathological lesions."

William D. Black, St. Louis: "Has no data."

James Moores Ball, St. Louis: "I regret that I have no data of value on blood pressure as relates to eye diseases."

H. Gifford, Omaha: "I am sorry to say that observations on the subject that you are inter-

ested in, have not given me anything of sufficient interest to be worth sending."

Frank L. Dennis, Colorado Springs: "I beg to say that I have no available data on blood pressure in diseases of the eye, ear, nose and throat."

William H. Dudley, Los Angeles: "I will say that I have used the sphygmomanometer considerably in the last few years, in the diseases mentioned, I must confess to not having as much benefit from it as one might have expected."

William Briggs, Sacramento, Cal.: "I regret that I have not tabulated or collected data of my cases of eye troubles due to abnormal blood pressure. With the more accurate methods of determining the condition of the blood-pressure, in relation to eye diseases, will be more definitely defined and will be of great assistance in practice."

My experience, coupled with the men as quoted. I deduct the following:

1. The use of the sphygmomanometer is of no value in external diseases of the eye.
2. In severe hemorrhages of the nose and throat, not traumatic, it is best to take the pressure.
3. It is of no value in diseases of the nose and throat only as stated above.
4. I have found it of no value in either acute or chronic diseases of the ear.
5. It is of no value in glaucoma.
6. It may or may not be of value in internal hemorrhages of the eye.
7. It is well to take the blood pressure before doing a cataract operation.
8. In fact it is of no value in eye work unless associated with other diseases.

I think we have a great deal to learn in regard to the significance of blood pressure, and no certain diagnosis should be placed upon the blood pressure alone, be it high or low, but it should be a guide and when taken in conjunction with other symptoms, it may be of great value to the physician as well as benefit to the patient.

Cinnamon Oil for Warts.—Oil of cinnamon, applied to the head of a wart as an escharotic, causes little heat, no burning, no scab, and no scar, according to Rosenberg, who states in *Eltingwood's Therapist* that he has obtained the best results from its use in this connection.

A War Dressing.—Sawdust, excluding large fragments by No. 8 sieve and fine dust by No. 40, packed in gauze and sterilized by heat, is being extensively used as a dressing in the European war.—*Buffalo Medical Journal*.

HIP JOINT DISEASE.*

By W. L. MOSBY, Bardwell.

This disease is much more frequent in young life, especially after the third year and the semi-decade from 5 to 10 years of life give the greatest number of cases and the period from 10 to 15 years of age give the next greatest number of cases and after this a gradually less number occur. Coxitis or morbus Coxarius as it is called by some authorities, is etiologically a tuberculous osteomyelitis having its origin in the acetabulum or the epiphyseal end of the femur, other anatomical structures of the joint becoming involved later, synovitis, arthritis with their sequellae, suppuration, caries or necroses, etc.

SYMPTOMS.

Tuberculous disease of the hip-joint in early life is attended with slight symptoms in its incipency and as successful treatment is dependent largely on an early diagnosis it becomes very important that we do not fail to properly interpret the earliest manifestation of the disease and thereby forestall further development with its invasion of contagious anatomic structures. Later or after months have elapsed the symptoms are more pronounced but our success in treatment is delayed and prospects for complete cure reduced. The initial symptom is a limp or lameness, mild in character always suspicious, gradually progressing until finally the entire limb participates in the "limp," usually this condition has existed for some time before the surgeon has been privileged to see the case and while a positive diagnosis is not yet possible, a suspicion should suggest a guarded prognosis to the family and the immediate institution of prophylactic measures to prevent further development of disease.

Pain and tenderness are soon in evidence as the initial symptomatic indication of the existence of this pathologic condition, with increased "limp" or now a "drag of the foot" or limb. Pain is aggravated by use and in proportion as the child exercises the pain will also be increased. Night brings more suffering for these unfortunate patients and they become the victims of "night terrors." Pain is frequently referred to region of knee joint as well as hip in older children competent to locate and analyse symptoms. I recall the first case I was permitted to see in practice in which two splendid physicians of reputation and experience was led into the error of diagnosing disease of the knee-joint on account of reflected pain. My diagnosis

was confirmed by an able suregon to whom I referred the case partly on account of want of confidence in my judgment, I being an inexperienced practitioner at that time. My diagnosis was further confirmed by subsequent development in the case.

These eccentric pains are due to irritation of the obturator or crural nerves, both of which send branches to the knee as well as the hip-joint. Tenderness occurs later as an initial symptom and can be elicited by grasping the head of the femur or great trochanter and pressing against the acetabulum. Limitation of motion will soon occur and is due to muscular irritability or reflex contractures and disappears under anesthesia. We will now observe flexion, abduction and outward rotation, flexion relieves tension on psoas muscle and abduction and rotation relieves tension on fascia lata and consequent joint structures.

A tilting forward of the pelvis is produced by extension of the limb and is best observed by placing the patient on a table in the recumbent position when, if knee is made to approach table the pelvis will be seen to pitch forward and on being released pelvis will return to normal position. This is an invaluable symptom and should be sought in every suspicious case. Adduction or superadduction will produce or increase pain and tilts the pelvis to opposite side, caused by increased pressure over fascia lata and tension of joint structures—a compensatory lardosis. With these symptoms may be associated an apparent shortening but most authorities think this more apparent than real. Actual shortening does really take place later and when it exists may be due to one or more of the following pathologic condition as given by Fowler.

1st. Inflammatory atrophy or changes in head of femur.

2nd. Inflammatory destructive changes in acetabulum by a granular osteomyelitis, producing atrophy of medullary tissues.

3rd. Inflammatory separation of head of femur in upper epiphyseal line, the cancellous tissue is destroyed and the effect is essentially that of an intra-capsular fracture of the neck of the femur with its disastrous results as to future usefulness of limb functionally.

4th. Dislocation of the head by inflammatory destructive processes is not so frequent as formerly thought to be. Atrophic changes in head and acetabulum at same time produces a true pathologic dislocation.

5th. Inhibition of growth by disease of bone centers in epiphyseal line will result in shortening.

*Read before the Carlisle County Medical Society.

PROGNOSIS.

Prognosis is both functional and vital and is greatly influenced by early treatment.

Functional usefulness of limb is influenced by such results as shortening, contractures and ankylosis.

Life is endangered by such grave primary conditions as hyperacute tuberculous synovitis with suppuration or secondary general miliary tuberculosis, tubercular meningitis, pneumonia, amyloid degeneration of abdominal organs or kidneys, and chronic pyemia and asthenia. (Fowler.)

We know of no disease in which the prognosis will be more influenced by early and proper treatment of hip-joint disease and especially is this true with children so situated that parents may fully co-operate in carrying out successful treatment. While we may confidently expect most of the cases that come to us early to recover yet it is a fact that many of these succumb to tuberculosis later in some of its forms. The pathology of the disease suggests a slow course and when symptoms abate or ameliorate we should not forget that recovery is often apparent rather than real and that relapse may follow even after long periods of seeming good health.

TREATMENT.

This includes management in its fullest or broadest sense with therapeutics of disease based on pathology and circumstances of each individual case. It is well to work out our diagnosis in a way conclusive and satisfactory to ourselves at least and secure complete co-operation of family and patient as treatment will gradually cover a long period of time and success will only be attained by careful attention to detail of management as given by the surgeon in each individual case.

In suspicious cases where a positive diagnosis cannot be made it is better to err in treatment on the side of safety and treat for hip-joint disease rather than neglect such a serious malady even where proper environments exist.

Absolute rest in bed is desirable in all cases. Tonics selected to suit conditions present are valuable and should be alternated in such a way as to render their administration tolerable to patient.

Iron, arsenic, cod liver oil, creosote, guaiacol and hypophosphites or glycerophosphates are among our best remedies.

The general nutrition of every case should receive our attention and generous supply of good wholesome food sufficient to sustain growth and supply waste will better enable patient to overcome disease as malnutrition should be overcome. Open air possesses the same beneficial effects here as in other tuber-

culous conditions so these little sufferers should be given all the fresh air possible even outdoors when weather conditions will permit.

Rest in bed is intended to imply recumbency, so this position should be maintained from the earliest indications of the disease and when pain and tenderness on pressure appear we should combine extension. Position and extension is the "ideal" to be attained in the management of these patients. Extension may be secured by the ordinary "weight and pulley" as used in the treatment of femur fractures as in the Bucks extension method. The weight necessary will depend on the comfort of the patient as evidenced by relief from pain and will vary, but may be used, one pound for every year of age of child up to twenty years.

The relief of pressure on the sensitive joint structures and muscular "spasm" by extension affords not only comfort to patient but contributes to a cure by influencing congestion and inflammation locally but it also overcomes the contractures and mal-position or deformities that may insue when such measures are not utilized.

In children that are refractory or where we can not secure rest otherwise, we may apply a plaster of Paris cast to obtain rest.

Many forms of mechanical appliances have been devised to secure fixation of joint with extension and they will be useful in suitable cases, and often, in latter part of treatment. The Thomas and Taylor splints are possibly the most frequently used of all the manufactured portable apparatus for this condition and may be considered in our surgical paraphernalia.

Where we are using ambulatory apparatus by day we should apply the weight and pulley by night and it can be easily accomplished by attaching the weight direct to a slipper properly fitted to patient so that pressure will not interfere with circulation or produce pressure sores.

Urinary Calculi.—J. Rosenbloom, Pittsburg (Journal A. M. A., July 10, 1915), reports the results of the chemical analysis of a new series of twenty-six renal calculi, in addition to the twenty-five previously reported by Dr. Kahn and himself. As in the former series the results show that the large majority of renal stones are chiefly composed of calcium salts and not of uric acid or urates, only two of the twenty-six having the latter composition. Rosenbloom calls attention again to the fact that the therapeutic measures for the treatment of insoluble calcium salt calculi are altogether different from those to be employed for uric acid calculi; hence the need of a chemical examination of all renal stones before a rational treatment can be undertaken.

PUERPERAL ECLAMPSIA.*

By W. H. STROTHER, Owensboro.

In bringing before you for your consideration, the subject of puerperal eclampsia, I do so with a full knowledge of the fact that its etiology has been a mooted question and much has been written and said about the disease. I have taken pains during the last month or two, to consult a large amount of literature consisting of the latest books and periodicals on the subject of eclampsia, and find that various writers high in authority, differ materially as to its etiology and treatment, as will be shown by some references. There is no subject in obstetrics or midwifery to which greater interest attaches than that of eclampsia. It is called the disease of theories and rightly, too, on account of the vast number of theoretical explanations given to prove its origin. Experimenters and clinicians have for years endeavored to uncover the true causative factor, but without success, and the treatment has been altogether empirical up to recent times. The most plausible theory is that of a toxemia, some poison circulating in the blood which produces necrosis of the liver, and directly or indirectly degenerative changes of the direct toxic action on the anterior cerebral cortex. Certain it is that underlying conditions most often present are those involving the kidneys or the liver or both kidneys and liver. DeLee says that the liver is always involved, either primarily or secondarily. Women with chronic nephritis seldom have convulsions in pregnancy and labor; but they suffer other complications, anasarca, uremia, pulmonary edema, retinitis, albuminuria, cerebral hemorrhage, and premature labor. When convulsions do occur in chronic nephritis, then it is hard to make a differential diagnosis. Eclampsia occurs about once in six-hundred (600) labors, but this varies in different statistics and different localities. By three to one more frequently in primipara than multipara. The prognosis is worse in multipara. It occurs usually in the last three months, but cases have been reported as early as the tenth week. Fatal cases are reported in the third, fourth and fifth months. About twenty per cent. of the cases of convulsions begin during pregnancy, sixty per cent. during labor and twenty per cent. after delivery. Cova states eclampsia occurs in from five to eight in primipara to one in multipara, that the second attack is rare, that the disease usually produces immunity.

DIAGNOSIS.

In eclampsia the diagnosis that profits is that which perceives the approach of the malady while it is yet a great way off. The man who sees a pregnant or parturient or puerperal woman in convulsions, even though it be his first experience, does not need to be told as to what is before him. Immediately upon being engaged, for attendance upon an expected labor, a specimen of the urine should be asked for and this examination should be repeated at regular fortnightly intervals until the last month of pregnancy, when once a week is not too often. The patient should be instructed particularly during the last three months of her time to report promptly any nausea, headache, puffiness, especially of the face and hands, epigastric pain, and sudden failure of sight are usually near precursors of the convulsions. A pregnant patient with renal affection great enough to cause a dimness of vision to such extent that she cannot thread a needle or read ordinary print easily, with spells of temporary blindness during which time everything about her seems as all color of flowers and lights is suffering from an extensive auto-intoxication. Toxins that are strong enough to cause a paresis of accommodation and such symptoms as I have just mentioned are certainly toxins of a very serious nature. If these symptoms are allowed to go unchecked the patient will soon have eclampsia and probably die. Convulsions and coma during pregnancy may come from brain tumors, tubercles, apoplexy, epilepsy, hysteria, phosphorus and strychnine poisoning. The characteristic of true eclampsia are repeated convulsions, with or at least lethargy between them, early fever and marked albuminuria, with other findings of renal involvement, but Cecil Kent Austin, of Paris, France, reports a case of eclampsia in which he had examined the urine repeatedly during pregnancy and the patient had presented none of the other symptoms of eclampsia, but which he attributes to generalized hard edema without the albuminuria; and, therefore it behooves us to take the blood pressure and if there is increased arterial tension should put the attendant on his guard. Epilepsy is eliminated by histories of previous convulsions or absence of the contracted pupil and diminished or absent reflexes. Hysteria will cause no trouble to an observer who has seen both conditions. An atypical convulsive seizure lasting a long time with grotesque motions and spastic contractions of muscle group retained consciousness, and mobile pupil without cyanosis or stertorous breathing or fever serve to make the differentiation.

*Read before the Daviess County Medical Society.

PROGNOSIS.

Over twenty per cent. of the women afflicted with eclampsia die and this has hardly been affected by changes of treatment in the last one hundred years. Statistics vary from 5.31 per cent to 45.7 per cent for mothers and from 30 to 42 per cent. for the child.

When attacked by true eclampsia multipara are no more endangered than primipara, but since renal diseases are more common in multipara the prognosis is usually worse when convulsions do occur.

In quoting DeLee, he says that the worst cases he has had were where the attack began postpartum, but the majority of the writers say where eclampsia occurs during pregnancy has the highest mortality, during labor less and during the puerperium the least, but for the child the chances are not good, nearly half of the children dying as a result that is due, to, first, prematurity; second, toxemia; third, by asphyxiation by repeated convulsion of the mother with prolonged cyanosis; fourth, drugs, morphine and chloral, administered to mother; fifth, by injuries sustained during birth, especially forced delivery.

The child may die of eclampsia after delivery. One must therefore give a very guarded prognosis. Death comes from exhaustion, heart failure, toxemia, embolism, thrombosis of the pulmonary artery, hemorrhage of the brain, oedema of larynx.

Further, the patient is endangered by operations designed to deliver her, ruptured uterus, post-partum hemorrhage from cervical tears and sepsis may prove fatal. Infection is a common cause of death and eclampsies show a decided susceptibility to it. In individual cases the pulse is the best index. If full, hard and below 120 there is no immediate danger, but if faster, weak, compressible or running the prognosis is bad.

Every pregnant woman should be considered a possible candidate for eclampsia and should be watched and guarded accordingly. Albumin is one of the most important findings, and is never marked without toxemic symptoms, scanty urine with diminished solids is the next importance, casts, if numerous, white or red blood corpuscles with renal epithelium, show the acuteness of the process. Headache, nausea and somnolence, with the above all point toward eclampsia as the probable outcome. Under the circumstances, first the diet should be so ordered that just enough nitrogenous matter is given to sustain life in the form most easily assimilated, and that will leave the least amount of waste and by-products, which throw extra work on liver and kidneys; second, the enunctories should be stimulated to throw off the poison already in the blood. In advanced cases where eclamp-

sia is threatening and quick action is needed, the subcutaneous injections of normal saline infusion is a valuable means of starting the skin and kidneys.

In spite of the above treatment, should headache, twitching of the muscles, somnolence, nausea and vomiting, pain in the epigastrium, general oedema, high arterial tension, marked albuminuria continue with failure of sight, it is almost immediate precursor of convulsions and the induction of premature labor is not only justified but imperative-ly indicated.

The treatment following the eclamptic seizures. There are three general plans of treatment. Two extremes and one occupying a middle position.

Stroganoff, the distinguished Prussian obstetrician, has recently reported 400 cases with a maternal mortality of 6.6 per cent. under his conservative treatment of chloroform, chloral, morphine, darkened rooms and quietude without operative interference.

Lichtenstien had 60 consecutive cases with no deaths he attributes to blood letting with practically Stroganoff's treatment.

Linke is another advocate of the conservative treatment and practically claims that convulsions should be treated and pregnancy let alone. He believes in medical measures entirely and presents statistics of 30 cases with a maternal mortality of 13.3 per cent in which the treatment was limited to veratrum viride, hot baths, general catharsis and strictly a milk diet.

Hirst's treatment which is described in detail in his text book, is based upon the control of the convulsions with chloroform, the reduction of blood pressure and the beginning of elimination by veratrum viride, the use of gastric lavage and the introduction into the stomach, through the tube of two ounces of castor oil and two to four drops of croton oil for a brisk purgation. One pint of normal salt solution under breast every eight hours for diuresis. If the veratrum viride does not effect the blood pressure sufficiently then resort to venesection. And under ordinary circumstances allow labor to occur spontaneously.

E. P. Davis in his text book, describes the following plan. Keep patient under chloroform during convulsions. If the patient is in labor with cervix two-thirds dilated, he completes the delivery as soon as possible, otherwise he allows nature to take its course. If the patient is not to be delivered he resorts to venesection, followed by intravenous injection of normal saline, stomach lavage and hot packs. If blood pressure still remains high then he gives 20 minims of veratrum viride and repeats as often enough to keep pulse

down to 60. It is well to state here, that recent investigations have shown that chloroform causes the same pathological changes in the liver that are seen in eclampsia and that accordingly ether is the safer anesthetic.

Duhrssen's dictum is after the first convulsion, put the patient in a deep sleep, and deliver at once. And experience is accumulating to prove that this gives the best results. Peterson collecting six hundred and fifteen cases of early delivery as soon as possible after the first convulsion, finds the mortality of 15.9 per cent compared with 28.9 per cent. in the maternities under the so-called conservative treatment.

Another strong argument for early delivery is the larger number of children saved thereby, estimated by various authors as two or three times as many. The method of effecting the delivery depends on, first, the period of pregnancy; second, on the environments of the patient; third, the state of the cervix; fourth, the skill of the operator; fifth, the extreme complications, for example, contracted pelvis, placenta previa, and etc. Before the seventh month all the children die, but we should try and save all the babies. If the cervix is fully dilated delivery is accomplished at once by forceps if the head is engaged, by version and immediate extraction if the head is above the brim. The pains in eclampsia are usually strong and rapidly efface and dilate the cervix. If the cervix is effaced, shortens, takes up, so that only the thin edge remains, this may be dilated with the fingers or any metallic dilator on the market or rubber bags. If the cervix is tightly closed, not effaced, the cervical canal long, the greatest difficulties are met, also where you have a deformed pelvis, a cystic fibroid tumor obstructing the vagina without doubt the vaginal Cæsarean section, where it can be performed, is the best method of delivery under those conditions, but you find a number of men who advocate it first of all when the convulsions begin, among them are the following: Peterson, Murphy, Boston Lying-in Hospital, Barkley of Lexington, and a host of others who have had a number of cases of eclampsia and have furnished a great many statistics to support their views. Adjuvant treatment should also be carried out, protection against injury, since the convulsions sometimes show frightful vehemence, the patient must be in a bed in a quiet room with only one or two present as an eclamptic needs all the oxygen she can get. False teeth should be removed, if any; to prevent biting the tongue, a simple device like a wooden clothes pin wrapped in a thin handkerchief, as the attendant sees the attack approach it is placed between the

teeth so that the elasticity of the prongs takes up the champing of the jaws.

Heart failure may be induced by forcibly holding the patient still and it is better to give a hypodermic of morphine and proceed to deliver as soon as possible. Venesection is now coming into favor again as an adjunct and bids fair to hold a permanent, but secondary place in treatment.

The after-treatment is on general lines. Water is given for eight hours, then milk and water, or rice water with strained gruels, meat and broths being withheld since the kidneys now begin to act freely, it is well to watch the bladder for overfilling. Involuntary bowel movements are the rule, and therefore the lochial pad should be arranged so that the feces do not dam up into the vulva. Warm water bags should be watched closely because eclamptics are especially liable to burns and necroses. The temperature of the eclamptic quickly subsides, a rise after such a fall indicates sepsis or pneumonia. Nursing should not be allowed until the puerpera has been fully conscious several days and the urine has become nearly normal and her strength permits. There are a few cases reported that the milk of the mother caused convulsions in the child.

Benign Sarcoid of the Skin.—J. Zeigler, Chicago (Journal of the A. M. A., Aug. 28, 1915), gives the history of the conception of benign sarcoid and shows how the studies of it have rather complicated and multiplied the types. Darier in 1910 gave out four types of sarcoid: 1. Boeck's type: the tubercus, papular and diffuse infiltrating form. 2. The Darier-Roussy type: subcutaneous sarcoid of the trunk, symmetrical and resembling tuberculosis. 3. "Sarcoides noueuses et nodulaires," resembling erythema induratum. 4. The Spiegler-Fendt type: round cell, nontubular tumors. Since 1910 there have been reported probably less than thirty cases. That many of the cases bear a more or less intermittent relationship to tuberculosis must be admitted, but Zeigler doubts whether we should unite the two. A somewhat different attitude may be justified regarding its relationship to syphilis as brought out by recent observations. He mentions the remarkable capacity of syphilis for imitating other conditions, but it must be admitted that the positive Wassermann and even response to salvarsan do not necessarily establish a syphilitic origin of any lesion of the skin. Latent syphilis may coexist and have other diseases superimposed on it, and salvarsan will itself often cure other cutaneous disorders than syphilis. It is therefore not improbable that some cases reported as sarcoid do not really belong to that type.

A CASE OF CHOLELITHIASIS SIMULATING GASTRIC ULCER.*

By C. C. TURNER, Glasgow.

Mrs. N., white, age 28, widow, mother of three children. Family history negative, personal history negative, relative to tuberculosis and cancer. Had had no serious illness except three years ago when she had three attacks of gall-stone colic at intervals of three or four weeks and was operated upon, one stone being removed from the cystic duct and the gall bladder drained without being sutured to anterior abdominal wall. Patient had uninterrupted recovery, leaving the hospital on the twenty-first day.

The patient had no illness of any sort following, until November 1914, when she suffered an attack which she says was just like what she had before she was operated upon. The pain was relieved by morphine and she was up again on the second day.

I saw her first about eight weeks ago in one of these attacks which had come on suddenly. Pain in the abdomen, soon followed by nausea and vomiting, the abdomen being very rigid. Pulse 90, temperature 99, respiration 24. She was given one-fourth grain morphine hypodermatically which relieved her immediately. She had a second attack in about six days. A third in about a week from the second, and during this third attack she vomited some blood, bright red, probably not more than a drachm. Operation was advised at the time of the second attack, but refused. She continued to have these paroxysms of pain followed by vomiting at intervals of from two to four days for about four weeks. Her stomach was washed repeatedly and she got up a little blood almost every time she vomited. She thinks she vomited a tea cup full of blood once or twice but I did not see it. She certainly passed considerable amounts by the bowel. There was never any jaundice. And the temperature never over 101. And as she continued to get up blood, I feared I might be dealing with a gastric ulcer, however, eating had no effect on the pain. She was exquisitely tender over the gall bladder and over the stomach as well. Dr. Porter of Glasgow, saw her with me and was somewhat undecided as to the diagnosis as the history was not typical of either gallstones or ulcer. However, he thought gall-bladder disease the best guess and advised operation, to which she submitted. An incision was made through the line of the old scar and the stomach inspected. No sign of ulcer was to be found neither any scars. Then the gall bladder was opened up

and six stones the size of BB shot were removed one being slightly impacted in the cystic duct. The gall bladder was drained and sutured to the anterior abdominal wall. That was three weeks ago and the patient is now ready to leave the hospital and has never vomited blood since the operation.

WHY WE SHOULD ATTEND THE COUNTY MEDICAL MEETING.*

By E. G. THOMAS, Benton.

Because it is the unit of power and representation to the state and A. M. A. thanks to the original author of all our medical organizations, the immortal J. N. McCormack, of now National fame, and well he should be, for his heaven-bestowed brain, wide information, and his sterling honesty and great love for helpless humanity, ignorant men, and women and children who have no political say in our laws or their enforcement.

To have any say in the government of our State or National Association we must be a member of the county society. Then through the State delegates to the great A. M. A. so that resolutions started in any Western Kentucky county at a county meeting can, through its delegates, be carried to the State association and there be thrashed out, then to the A. M. A. and there fanned of its chaff and, if of sufficient importance and utility or value, will have the endorsement of every worthy practitioner in the land.

If we neglect the county society our name is Dennis as to any influence in all matters medical or the government of the profession in either State or Nation.

Even the life insurance companies appreciate this in the selection of their medical examiners, and while they do not always require them to be members of the county, state, and A. M. A., they think a great deal more of them if they do, and make the M. D. conscious of his dereliction on application for a place on the role of their trusted examiners.

In the county society originates most of the new, and at first startling, inventions and ideas, as almost all of the great benefits to humanity in the past have come from men of obscurity, or very moderate notoriety at the time, but soon after becomes famous at home and abroad.

We meet at some good brother doctor's office and read our homely little paper, written in plain English, sheared of all befogging technicalities, and go to the spot without preamble or apology, and express our ideas in our own language, without rhetorical embellishment, so as to get the leading idea, the

*Read before the Barren County Medical Society.

*Read before the Marshall County Medical Society.

central thought before the company in the shortest possible time, at the close of which the discussion is general, and frequently waxes warm and free in a good natural way.

Oh! the many good things that I have carried away with me from our county society where there were but few in attendance, but it was a good feast of fat things medically and socially.

We have the chance to weigh ourselves by comparison with others and we sometimes see how far we have fallen behind in the great battle of life.

If we do not attend we don't keep step, neither are we in the front column or on the firing line, just one poor devil in a gang by himself blundering along wrapt in his own moody and gloomy meditation. But if he has the grit of a free born American or Kentuckian he will see his weak places and rebuild his medical (not his political) fences, and study the new things that are brought out and get better acquainted with the old, but, if he is a constant attendant at his county society he will be at other county societies and at the State and A. M. A. when it is at all convenient, and such a man never slips into a back seat but walks boldly to the front and to the thickest of the fight. He walks like a man without fear or embarrassment and seeks a place where he can see and hear what is done and said, and even though he never writes a paper or takes part in the discussion, he at least does a great deal for himself and his patients by his presence to stimulate to extra exertion others who, by nature, opportunity, or application are better fitted to take a more active part in the program, while we of the more timid class can store up the precious jewels in the shape of experience and operations and treatment in old and new diseases and accidents.

Go to, no more of this. You all know that all I have said is true before I could say it, but there is a social side to this matter that is worth ten times its cost in time and trouble.

I see that there are no exemptions to the rule, men who are frequent or constant attendants of their county meetings are more approachable, more ethical, more gentlemanly, and are less inclined to seek or to take the advantage of a brother practitioner, say fewer bad things, and are more apt to say good ones when they should, than the doctor who fails to attend because of trouble, expense, or some fancied slight, usually where there is no earthly cause for same, or, as I have heard of a few, staying away for imaginary prominence it seems to give them. May God help them and especially the little ones who come under their care, for they are sure to be behind their neighbor doctor in everything that relates

to the cure or comfort of the sick, and are usually selfish egotists and have not enough tact or talent to see their lack of manhood to give and take in the great battle of life.

Now let's all come and get busy, if not a member get to be one, join us, come regularly, throw in your mite, take away a load of short hand experience that can be found nowhere else. Let's shut out petty jealousies, envies, back biting, clanishness, and useless bragging, (so often without foundation), so that when life is passed we can hear the plaudit, "Well done, thou good and faithful servant, enter into the joys of thy Lord."

THE SIGNIFICANCE OF ALBUMEN IN THE URINE.*

By J. T. DIXON, Owensboro.

There can be no doubt that the infectious diseases are decreasing very materially year by year, because of a better understanding of their origin, which enables us to put into practice early preventive measures. On the other hand it is just as certain that there is a very material increase toward a tendency to renal disease, with their accompanying cardiovascular complications. Therefore, it follows that if we should hope to check the advance of these renal cardio-vascular diseases, as we have the infectious diseases, we must see the patient early and show a growing concern in any sign or symptom that would lead us to suspect any condition threatening kidney and heart.

If we could only educate our clientele or the public, to regularly submit to a semi-annual physical examination, we should be able to detect an oncoming disease involving kidney and heart, and through timely advice, guide our patient out of a channel that leads to danger and death, by regulating his methods of living, a change of diet, a correction of intestinal decomposition, a cure of pyorrhoea, a drainage of gall bladder, or locating and draining pus foci anywhere in the anatomy. If we could only bring to pass the privilege of examining the well people once or twice a year there would be the same, if not greater decrease in the renal cardio-vascular diseases, as there has been in the infectious diseases. But as it now is, the trouble is already manifest before our aid is sought, leaving us helpless to combat a disease that in many instances is far advanced when first seen.

No other abnormal substance found in urine, possess such clinical interest and is so easily detected when present in more than traces, as albumen. Its presence was formerly regarded as positive proof of the exist-

*Read before the Daviess County Medical Society.

ence of some form of kidney trouble, if not of Bright's disease itself. We now know that albumen can be present in the urine of people apparently enjoying good health, that live for years without evidence of renal or cardiovascular disease. This is known as functional albuminuria, and occurs most frequently in childhood and adolescence. It is slight in grade, is transitory, the urine is otherwise normal. Its occurrence usually follows unusual muscular exercise by those not use to it. It is unassociated with other symptoms. There are no tube casts, it is usually of brief duration, or at least intermittent. There is no feeling of ill health, no left ventricle hypertrophy, no increased blood tension. We gather from this that the harmful effects of true nephritis cannot in the least be attributed to the loss of albumen, which is estimated to be from one grain to two hundred grains per day, in actual Bright's disease. This loss, it is said, can easily be recovered in one good meal.

Cabott sums up his personal experience by saying, "In the absence of other signs and symptoms of disease, finding albumen in the urine is rarely of importance. Large quantities of albumen are in his experience never found without other evidence of disease. Small quantities without other evidence, when occurring at, or near adolescence, are practically negligible. In latter life any amount of albumen in the urine, is practically always accompanied by other evidence of disease, such as hypertension, headache, dropsical effusions, etc."

We may assume that Dr. Cabott means by "later life" men over 40 years old for at this age even traces of albumen are indicative of cardio-vascular renal disease, more than any other pathologic possibility. If even traces of albumen possess such diagnostic importance as this, we should appreciate and adopt the method that would permit us to say positively, that this patient is, or is not passing albumen in any quantity.

Functional or periodic albuminuria, is so constant after unusual exercise beyond the accustomed limit, that it is said, practically every one can, if he will, produce albumen in his urine, if he only overexerts himself.

McFarland states, that after examining twenty foot-ball players immediately after a game, he found in the urine of fifteen, varying amount of albumen. Experiments show that after the ingestion of a heavy proteid meal of meat and eggs in some apparently normal persons, albumen can be demonstrated in the urine, beginning about two hours after the meal, and lasting four hours. Knowing that overeating is a frequent cause for elevated blood pressure, we may assume that this

excess of proteid in the blood, and albumen in the urine, after a heavy meal, may have temporarily at least, injured the kidneys; which if continued over a long period of time, will certainly result in nephritis, the same as the ingestion of certain drugs, or the toxemias of certain infectious diseases, such as erysipelas, scarlet fever, smallpox, all these producing a real hyperaemic condition of the kidney, favoring the secretion of albumen, which will disappear at the abatement of the disease or the removal of the cause, if the kidney is not irreparably damaged.

The most interesting of all, is the cyclic albuminuria. This form shows a daily cycle, the albumen being absent at night. When the patient is recumbent, but appearing when he stands up. The terms orthostatic or postural are fitted to these cases. It is the history extending over a considerable time, and the positive absence of all physical signs, which permit us to place these cases among the functional albuminurias. However on close examination we find even these cases to be below par. They are among youth, usually of vicious habits, extremely nervous, cigarette smokers, or masturbators. May be anemic, with vague abdominal pains, the result perhaps of movable kidney, as it is proven, a large per cent. have movable kidney. Some claim an anomalous condition of the renal vessels or an abnormality of renal epithelium, which of course would border closely on the pathological, for it is one of the chief functions of the renal epithelium to retain albumen, and when it fails to do so, something is wrong.

In true albuminuria, or albuminuria of the dreaded Bright's disease, the disease that insidiously or slowly creeps upon us without warning, and whose very presence is unknown until the most vital organs of the body are destroyed or so weakened as to invite the invasion of other diseases claiming us as their own. When in reality the prime cause should be charged to the account of Bright's disease, and the contributory cause to the pneumonia, the erysipelas, or whatever the invading disease may be, causing death. It is directly, and especially indirectly responsible for a large per cent of our mortality.

Now, since there is such a wide difference between true albuminuria, attended with the most serious consequences, and functional albuminuria, attended with very little danger, it is our plain duty to make this distinction in the interest of our patient, which can only be done by repeated careful examinations, with the most delicate approved methods. Much care should be exercised before classifying an albuminuria, unless it is plainly written in large letters. We should by all means know

whether it is transient or permanent, functional, or renal, and not condemn a patient to a regimen, either dietary or hygienic, of Bright's disease simply because he has albumen in his urine. We should not forget that a considerable number of albuminurias of childhood and young adult life, are harmless, and in every case morning urine should be tested, especially if there is no high blood pressure or other cardio-vascular signs.

Fortunately, we can find in almost every case of nephritis, even in its incipency unmistakable evidence of serious kidney lesions. Aside from the ever-present albumen, we can find the various casts, kidney cells, round or fusiform, with their multiple nuclei, we can accurately measure the urine secreted, and gauge the functional activity of kidney, by the phenolphthalein test. The presence of pus, blood and mucus may be extra-renal, yet have a bearing on the case. On physical examination we can demonstrate the hypertrophied heart, the elevated blood pressure, the headaches and other cerebral symptoms, the retinal changes, dropsical effusions, and such other phenomena as may show in the case. All of this can be proven to a certainty, when delicate tests and accurate measures are carefully executed, and it is about one of these delicate tests, I will speak presently.

Whatever test we may use in the search for albumen, we must be thorough and accurate. We must understand the phenomena, shown by certain rings and precipitates. We must have clean glassware, clean test tubes, and if heat be used, the proper kind of flame.

The test most generally in use is the nitric acid or Heller's test. This test in the hands of the average general practitioner is often disappointing and misleading, when there are only traces of albumen in the urine to deal with. The care, the time, the light, are wanting, and the fine white line that could have been distinguished after half an hour's wait by trained eyes in a bright light, is overlooked in a back office after a hurried glance through a soiled test tube, confused by the rings of bile pigment and clouds of urates. This is no uncommon experience, and for this reason, Heller's test is for the laboratory expert, in whose hands it is a satisfactory, yet not to compare with the saline-acid-heat test of Ulrich.

I thoroughly recommend this test of Ulrich as superior to all others, because it is simple, delicate, and gives the positive reaction immediately. It is inexpensive, easily prepared and will not strain the fingers or destroy any fabric. A 2 per cent acidulated solution of common salt, is the only reagent required. It

is made by adding 2z of acetic acid to 12 ounces of saturated salt solution, and filtering. The method of testing the urine is simplicity itself. Into a clean test tube put about 2z of the salt solution, and carefully overlay with urine, and if albumen is present even in the smallest traces, a white ring is immediately seen at the point of contact. We all know that the delicacy of all contact tests, is owing to the ability to bring out the "ring" of contact. In this test, in contradistinction to all others, only one ring can appear at the point of contact, and that is always albumen. Whereas in Heller's test, other rings appear so close to the point of contact that they might not observe the fine ring of albumen.

The advantages claimed for this test are its cleanliness, its simplicity, its ability to demonstrate even the smallest trace of albumen, its stability and its cheapness.

If you will only try Ulrich's test side by side with Heller's, you will be convinced in a very short time of the superiority of the former. You will find many urines showing decided traces of albumen, (putting us in possession of valuable facts) that would prove negative by Heller's test, as ordinarily used.

In conclusion, I want to again emphasize the fact that it is of the greatest importance to recognize even the smallest trace of albumen in patients over 40 years of age.

That in children or young adults, we may have functional or cyclic albuminuria, without any serious kidney lesion.

That the ingestion of certain drugs and foods in excess, will produce transient albuminuria.

That violent exercise in people, not used to it, will cause a temporary appearance of albumen in the urine.

That the simplest and best test for the immediate detection of the minutest trace of albumen is the Ulrich test.

Paul Ehrlich—Paul Ehrlich will live in the history of civilization as one of the great investigators, genial, creative, fertile, excelling in "that boldness of the scientific use of the imagination which alone can extend beyond the obvious fact and reveal the unknown," one of the great benefactors of mankind.—Journal of the American Medical Association.

OFFICIAL ANNOUNCEMENTS

MINUTES OF THE GENERAL MEETING
OF THE SIXTY-FIFTH ANNUAL SES-
SION OF THE KENTUCKY STATE
MEDICAL ASSOCIATION, HELD
AT LOUISVILLE, SEPTEMBER
21, 22 AND 23, 1915.

SEPTEMBER 21, 1915.—MORNING SESSION.

The Association met in the First Christian Church and was called to order at 9:30 A. M., by the President, John J. Moren, Louisville.

Prayer was offered by Dr. E. L. Powell, Pastor of the First Christian Church.

PRAYER BY DR. POWELL

We thank Thee, our Father, for this meeting of men whose lives are consecrated to the healing ministry. We thank Thee for the sense of obligation no less than the privilege which they feel in giving their talents and their powers to this high work. We pray they may be brought consciously under the influence of their noble calling, and that they may link it up with Thine which is divine, for surely the impulses of these men to give themselves to such work are heaven-born, and all the work of training for this ministry must be done conscientiously with reference to the great good, the benevolent and beneficent good which can be wrought through this ministry. We thank Thee for the presence of this Kentucky State Medical Association, meeting in this place under these auspices, giving to all of us an uplift that perhaps otherwise would not come to us in view of our environment. We pray for the services here, the sessions that are to be held here, and that they may be of such profit and of such pleasure that these men shall go forth from this place and from this city under the influence of higher conceptions of their work, and with a greater and finer resolution give themselves whole-heartedly to this splendid ministry. We ask Thy blessing upon all of us as we try to bring ourselves into relationship with Thee. We know that all work, if it be honest work, if it be work done in the name of humanity, and in the interest of humanity, is sacred work, and we ask that Thou wouldst impress upon the medical profession a sense of the sacredness of this work in which they are engaged. We come to ask for the forgiveness of our sins; we pray that they may be brought into closer relationship with all that is true and beautiful and good, and we ask Thy benediction upon all of us, and finally, after we have done our work, as best we can, conscious of our limitations and weaknesses, may we renew our services under different conditions and under

a new sense. We ask all this in the name of Jesus Christ, our Lord. Amen.

THE PRESIDENT: The Sixty-fifth Annual Meeting of the Kentucky State Medical Association is now open and ready for the regular program.

The first thing in order is an Address of Welcome by Dr. Curran Pope, of Louisville, a man who needs no introduction to this audience. (Applause.)

ADDRESS OF WELCOME BY DR. POPE

Mr. President, Ladies and Gentlemen of the Kentucky State Medical Association:

You do not know what a pleasure it is to me to be permitted to-day to stretch forth my hand, as did Paul, and welcome you in our midst. Louisville and Kentucky have reason to be proud of this medical organization, composed of men who are earnest in their efforts, to attain the highest possible scientific work and, at the same time, to uphold all of these tenets that have ever marked medical men in social intercourse with their fellow beings. We have to stop for a moment and realize the wonderful value of an organization like this. Stop and think for a moment of what practical educational value it is to each and every one of you to come once a year to these meetings and refresh not only your older knowledge, but the acquiring of all the newer knowledge that is presented to you at each and every meeting. You not only occupy the position of a member of this Association, but you are in your turn an educator of the public, and an educator of the individual, for the doctor, at all times, is placed in such a position that his influence and power are ever that of educator as well as adviser. It is largely through the influence of the organized bodies of medicine that the medical student has been raised to the level of a better education, both scientifically and otherwise, and, it seems to me, that at all times, an institution of this character should be backed up with the strength and the power of its body politic in all of those measures that have to do with the general education of the public and the broader education of the individual.

We see what has been accomplished in tuberculosis by the force of the educational propaganda put out by the medical associations and by medical men as individuals. The doctor in his community, as a rule, exercises a great deal of influence with the lawmakers and incidentally in law-making. All of us have doubtless realized the uselessness, the futility of law-making where there is not back of it the sentiment of the community, and it is this sentiment in the community that you physicians should, at all times, exercise in its bearing upon the law-maker and in shaping

the making of laws. Law-making should be rather a practical matter than a theoretical one.

The practical needs of medicine to-day make it necessary that laws should be enacted, in order that county health officers may be put in each and every county of the State; and our common sense and fine scientific knowledge show that it is useless to try and make eugenic laws. Laws based upon laws in medicine are all right, but as we have to-day only a mass of data and no laws of heredity, it would be almost impossible to formulate a eugenic law that would be worth the name. Physicians must put forth their power and exert their efforts along practical lines, realizing that it is better to obtain the working needs of the hour rather than to try and put upon the statute books laws that have their basis in, not science and fact, but sentiment. Never should we forget that the millenium is not coming as yet.

I welcome you to Louisville, first, in the hope that the communications, both scientific and social, between you will be for your benefit, for your intellectual uplift, and for all those things that the real and true physician seeks, and each and every one of you, loving this Association, at all times and upholding its tenets, should look for the day when you can with truth and interest write upon the medical banner of the State, that each and every physician in each and every county is a member of the Kentucky State Medical Association. (Applause.)

Gentlemen, you are agents *de facto*, and you should certainly feel the responsibility and see to it that none of the lost sheep are left without the fold. Remember, that as doctors, or better still, physicians, that each and every one of you is a center for the propagation of and the upholding of all those tenets, not alone in medicine, but those that go to make up the social fabric, the political fabric and the moral fabric, and that any man who is not aligned in this direction and under this banner is derelict to the highest ideals of the profession that he represents. The doctor has, is, and always will be like the Nazarene, a man of peace, and it is to be hoped that some of this influence may possibly be exerted to prevent the terrible horrors, the terrible sacrifices, and the unhappiness that fall and follow in the wake of war. Ever from time immemorial, has the doctor been not alone a man that did not wish for war and slaughter, but he has ever been an individual upon battlefields and in hospital that has ministered to the saddest parts of great strife, and medical men should continue at all times, to stand opposed to everything that constitutes the brutality of war. (Applause.)

Louisville is a city that promises you a diversity of entertainment, and we will positively assure you that you shall not suffer from the monotony that a certain physician suffered from who went up to Rochester, Minnesota, recently. He said that shortly after leaving the station he saw Mayo street, and then he saw Mayo Park; he saw the Mayo Clinic, the Mayo Hospital, the Mayo this and the Mayo that. He saw the Mayo Foundation, until his patience was stretched just a little bit, and longing for solitude, he wandered toward the edge of town and ran across a measly kitten. The kitten so coincided with his personal feelings, that he began to stroke the back of this little kitten and finally said, "Whose little kitten are you?" and the kitten replied, "May-cw!" (Laughter.)

We promise you in Louisville that there will be no such monotony, but an absolute diversity at any and all times.

In the name of the Jefferson County Medical Society, whose guests you are; in the name of the City of Louisville and of Jefferson County, Kentucky, I welcome you. In her behalf I extend to you the best of wishes for a useful and happy meeting, full of succulent and scientific food and cheer, such as only true hearts and gallant courtesy can extend. We welcome you to your labors, scientific and heavy though they be, yet are no doubt the labors of Cupid and Psyche rather than those of Hercules. When you have learned and profited by the many excellent essays on your program, let me warn you that we have prepared a feast for you in the presence of your friends, where, amid the clanking of silver, the clinking of glasses and silver-tongued oratory, we will extend to you a Kentuckian's welcome to a Kentuckian, and hope that among these surroundings the night will be filled with gladness and the clouds that infest the day,

"Will fold their tents like the Arabs,
And silently steal away."

(Loud applause.)

THE PRESIDENT: To respond to the Address of Welcome, I take great pleasure in calling upon Dr. W. L. Heizer, a man who needs no introduction to this audience. (Applause.)

RESPONSE TO THE ADDRESS OF WELCOME BY DR. HEIZER.

Mr. President, Ladies and Gentlemen of the Kentucky State Medical Association.

On Saturday last your efficient Secretary walked into my office and said, "I have been delegated by the Council of the Kentucky State Medical Association to ask you to respond to the Address of Welcome. I said, "Who is to deliver the Address of Welcome?"

He replied, "Dr. Curran Pope of Louisville." "Well," I said, "The Council in its wisdom has decided after firing its forty-two centimeter gun to light a firecracker." "Yes," he replied with more candor than is his usual custom. "The Council desires to bestow added honors upon the Jefferson County Medical Society and Dr. Pope by contrast," so I am the goat. (Laughter.)

On a hot July morning in 1912, after three or four hours' ride over the mountainous roads of McCreary County, I rode up to a little log cabin with a board roof, a rusty stove-pipe sticking out at the top, and was greeted by fifteen breeds of dogs represented in two mongrels, and welcomed by a big mountaineer who met me at the gate and gave me one of the sincerest invitations which I have ever received. He said, "Howdy! Won't you light, come in, set down and rest and git yer dinner?" Can you beat it? (Laughter.)

Dr. Pope, in his address, couched in the most masterful English which he commands, has reminded us of our ideals. He has shown our obligations to the people, to ourselves, and to the Association. He has set before us the high standard which we must attain, but through it all I seemed to hear repeated the sincere, warm welcome of that mountaineer, "Howdy! Won't you light, come in, set down and rest and git yer dinner?" We will gladly do that for several reasons. We have brought our wives, sweethearts and mothers and daughters with us we want you to meet them socially and learn to appreciate them as we have learned to do. Again, we recognize that in the medical profession of Jefferson County you have a great many good, great men, and we have had enough experience to know that behind every great, good man there is a greater and better woman. We want our women folk to meet yours, that ours may be benefitted thereby and perhaps their task of keeping us out of mischief and making us better men may be made easier thereby.

And again, our women folk want to parade up and down your thoroughfares of trade, peep in at the wonderful shop windows loaded with beautiful things, make mysterious excursions into the innermost recesses of your large department stores. I am sure many of us will have a common experience this night. You will walk into the Seelbach Hotel, step into an elevator and be whirled to the nth floor and as you push open the bed room door you will find it dimly lighted with a sort of soft, "in the gloaming" effect. This has been dexteriously achieved by your wife's turning off the central ceiling light and hanging a bath towel or one of your socks over the bracket light. From the shadowy depths there will emerge the most charming of all wo-

men, your wife, her hair done up extra nice, her face evenly powdered and her gown more becomingly arranged than usual. She goes softly up to you and lays her hands gently upon your shoulder and looking up into your eyes with that delightful lovelight which you become to suspicion is artificial, she makes a few speeches in that wonderful voice which she knows how to assume upon special occasions. You begin to be suspicious that something is going to happen. You are sure when you look down at her lips puckered sweetly waiting for the usual salutation, and count the folds of the mucous membrane, that your suspected diagnosis is confirmed. A financial pucker! You match this with one that is entirely different from the one you gave her at the real puckering time, and without being too hurried, so as to avoid a rude awakening, you reach your hand down into your trousers pocket and say gently, "Pardon me, my dear, for passing from the sublime to the ridiculous, but how much may I have the pleasure of giving you to buy that new fall suit and hat. With the sweetest expression in the world and with well assumed surprise she asks, "You dear darling! How in the world did you ever happen to know that I had thought of such a thing?"

The next day as you are strolling down the streets you pass by McCauley's and think of the pleasant times you have had in the "roost," passing by the Avenue you can almost smell the smoke and powder of the wonderful melodramas of by-done days, and you think of the good time the other boys had at the zoo at Second and Jefferson. You pass by a shop window and look at a perfectly magnificent pair of trousers "Ninety-nine cents a leg;" you look down at your own frazzled pair, feel of your empty purse, think how beautiful your wife looks in her new suit and hat and decide that she will look a great deal better by "contrast" if you will wear your old pair. Likewise, you will pass by a show window full of shirts marked down to forty-eight cents, and for consolation go into one of your soft drink stands where they sell soda water, limeades, sweet milk, buttermilk, gin fiz—I mean ginger ale. I see one of my extra dry temperance friends shaking his head ominously as if I were going to make some preposterous suggestion. I was once instructed by a drunken man with whom I had gotten into an argument concerning the scriptures to go out and sleep with a calf and learn something by absorption. You do not have to drink anything alcoholic in Louisville. You can get it by absorption, breathing it in. In certain districts here in town as you pass through you get the impression that you are being anesthetized with the old A. C. E. mix-

ture with chloroform and ether let out. (Laughter.) But, gentlemen of the profession, we have seen a great change in that sort of thing. I am told that in years gone by a large per cent of the membership would get under the tables at the banquets. In eight years I have only seen three of our men under the influence of too much liquor. The medical profession has developed to the point that this sort of thing has gone out of style. (Applause.) I think we have no occasion for fear or uneasiness on that score, because we are not going to drink too much of what we should not drink; we are not going to see the things we should not see; and we are not going where little white kittens ought not to go, because our mothers, our wives and daughters are here, if not in person they are here in spirit which is the most hallowed presence of all.

We are glad to come here to meet with the leaders of the medical profession so that we can have our views criticised or approved. We expect to get intellectual refreshment and a mental feast. We are glad to come here because since we met in this city three years ago the great Louisville University has been enlarged, its teaching force augmented, its usefulness demonstrated, and it has added excellent laboratories with a fine equipment. The University now has alltime, well trained, well paid men, and we want you to know that the medical profession of Kentucky is behind the University of Louisville to a man. (Applause.) We are now glad to send our brothers and sons and friends to this Institution, realizing that in it medical education second to none in this country can be secured. We are going to support you in every way we can in the efforts to get financial aid from the State legislature in order that this great Institution of medical learning may be put upon a permanent and more satisfactory basis. Again, we are glad to come to Louisville to take advantage of the opportunity to see the great Louisville City Hospital. All of us know of its efficiency, but many of us have not had the opportunity to see its wonderful construction and adaptability of caring for the needs of the sick; and as we study its structure, its usefulness, its purposes, we cannot help but say that it is a concrete expression in brick and mortar and iron of the desires of the medical profession to serve unselfishly the people in the matter of protecting their health and lives, and that this expression is a voice from the Jefferson County Medical Society for

"We know what master laid thy keel,
What workman wrought thy ribs of steel,
Who made each mast and sail and rope,
What anvils rang, what hammers beat,
In what a forge and what a heat
Were shaped the anchors of thy hope."

The Kentucky State Medical Association is ready to acknowledge its debt of gratitude for this altruistic unselfish work of that great master and workman, doctor, surgeon, and fitting representative of the Jefferson County Medical Society, Dr. Ap Morgan Vance.

And so, Dr. Pope, recognizing the sincere and cordial expressions of welcome from you, appreciating the lofty aims which you have set before us, we seem but to hear the simple and hearty greetings of that splendid mountaineer, "Howdy! Won't you light, come in, set down and rest, and git yer dinner?" Our answer to that, gentlemen of the Kentucky State Medical Society, is that "We will, thank you, sir, we will."

THE PRESIDENT: I want to assure you, that your President, your retiring President, will not bore you with any address. There is only one thing I want to say, gentlemen, and I would like very much indeed to say this, namely, that the Kentucky State Medical Association in some way or other should support, advocate, or try and develop a means by which they can secure a postgraduate course at the University of Louisville. (Applause.)

Dr. Pope has mentioned education. I am in favor of medical education. There are a lot of us who do not have time to keep abreast of the new things in medicine. It is almost impossible to do that; yet if we could go to an institution of some kind and get a review of two or three days of the new things, it will be great help to us.

At the Newport meeting I suggested a course on fractures, and through the kindness of the University we succeeded in having that. The success of that was beyond our expectations. Men want it, and I am quite sure it can be arranged through the University and it will be a good thing. That is the only thing I ask you to consider as far as I am concerned. It is the only remark I have to make to you as your retiring President, unless it be, I fear the doctors of the State do not appreciate the value of the Medico-Legal Committee and the benefits they derive from it.

My work as President has been very pleasant. I have not had any strenuous duties to perform other than to sign checks. My only regret is that the checks did not come to me; they came to me to sign them, and then I sent them away. Otherwise, I have had very little to do, and many of the little things that have come to me have been only a pleasure to do. I feel that I was working for my fellow doctors, as good fellows as have ever lived, as fine a body of men as has ever lived in the State of Kentucky. They are the best fellows in the world; but unfortunately we throw a little mud at each other once in a while that we

should not do. Please, do not do that! (Applause.)

THE PRESIDENT: The Address of the President will be delivered to-night at the Seelbach Hotel, and the Committee of Arrangements will tell you about the entertainment that has been furnished for that evening. So at 8:15 tonight you will hear the Address of the distinguished physician, your President, Dr. J. W. Kincaid, who will now take the Chair as President of the Kentucky State Medical Association. (Applause.)

PRESIDENT KINCAID: Gentlemen of the Kentucky State Medical Association: It affords me greater pleasure than I am able to express to be with you to-day in the capacity, which I am now assuming, as presiding officer over your deliberations. Remarks that are generally appropriate to such an occasion will be delivered to-night at the entertainment at the Seelbach Hotel. The Secretary says that ladies are especially urged and requested to be present on that occasion; that the entertainment is as much for their benefit as it is for the members of the Association. So it is to be hoped that all of the members who have brought ladies will bring them out to-night, and those who did not bring ladies with them may, as in the days when various medical colleges existed here, bring their acquaintances with them. (Applause.)

We will now have a report from the Chairman of the Committee of Arrangements, Charles W. Hibbit.

C. W. HIBBITT: I will tell you that we have tried to arrange to fill up your hours. As the President stated, the President's address has been changed from this morning to to-night at 8:15 at the Roof Garden of the Seelbach Hotel. Following the President's Address we will have some specially selected moving pictures, and I hope you will all enjoy them. We particularly ask that the ladies be present.

At 2:30 P. M., on Wednesday the ladies will go on an automobile trip and will return to the city at about 5:30 or 6:00 P. M. At 8:00 P. M., the ladies are expected to meet in the parlor of the Seelbach Hotel and be escorted by the Ladies' Reception Committee to the theater.

Wednesday at 7:00 P. M., we will have a banquet at the Seelbach Roof Garden, which will be given to the visiting members of the Kentucky State Medical Association by the members of the profession of Jefferson county. This banquet will be entirely informal, and we expect you all to be present.

Any further special arrangements we may have will be placed on the blackboard from time to time. (Applause.)

Josephus Martin, Cynthiana, read a paper entitled, "Pneumonia in Children."

B. W. Wright, Bowling Green, followed with a paper on "Lobar Pneumonia."

These two papers were discussed together by Drs. Barbour, Tuley, Solomon, Anderson, Hermann, Shirley, Burnett, Boggess, Reddick, Dixon, Stewart, Collins, and the discussion closed by the authors of the papers.

O. O. Miller, Louisville, read a paper entitled "A Plea for the More Thorough Examination of Patients Presenting Symptoms Referable to Tuberculosis."

Discussed by Drs. Wilson, Morrison, Curry, Weidner, Reddick, Simpson, McCormack, Lock, Mudd, Richmond, and, in closing by the author of the paper.

O. P. Nuckols, Pineville, delivered the Oration in Medicine, on the subject "To-day and Yesterday in Medicine."

On motion, the Association adjourned until 2:00 P. M.

FIRST DAY—AFTERNOON SESSION.

The Association re-assembled at 2:00 P. M., and was called to order by the President.

B. J. O'Connor, Louisville, read a paper entitled, "Medical Treatment of Incomplete Abortion," which was discussed by Drs. Spidel, Atkinson, and in closing by the essayist.

J. W. Pryor, Lexington, read a paper entitled, "Some Observations on the Ossification of the Bones of the Hand," with lantern demonstrations.

T. W. Moore, Huntington, West Virginia, read a paper (by invitation) entitled, "Facts in Ophthalmology Essential to the General Practitioner," which was discussed by Drs. Dabney, Ray, Scott, Bledsoe, Wells, Carpenter, Pfingst, and discussion closed by the essayist.

M. L. Ravitch, Louisville, read a paper entitled, "Common Sense in Dermatology."

N. T. Yager, Louisville, followed with a paper on "Focal Infections."

This paper was discussed by Drs. Ravitch, Moren, Casper, Purcell, Anderson, Miller, and in closing by the essayist.

L. S. Givens, Cynthiana, read a paper entitled "Complications of Middle Ear Suppurations," which was discussed by Drs. Thomasson, Bledsoe, McClure, Reynolds, and discussion closed by the essayist.

C. A. Moss, Williamsburg, contributed a paper upon "The Head Cold; Parts Involved and Some of the Results."

Discussed by Drs. Lederman, Dabney, Kincaid, and in closing by the essayist.

C. E. Purcell, Paducah, read a paper entitled, "Diseased Tonsils; What Shall We Do With Them?"

Discussed by Drs. McClure, Dabney, Rey-

nolds, Thomasson and discussion closed by the essayist.

A. E. Stevens, of Mayfield, read a paper on "The Harrison Law," which was discussed by Drs. Owsley, Atkinson, Blackburn, Seaggs, Cassady, Bush, Frazer, Mudd, McCormack, Edelin, Board, and, in closing, by the essayist.

On motion, the Association adjourned until 9:00 A. M. Wednesday.

WEDNESDAY, SEPTEMBER 22, 1915.—SECOND

DAY—MORNING SESSION.

The Association met at 9:00 A. M., and was called to order by the President.

J. B. Mason, London, read a paper entitled, "Roentgen Ray in the Diagnosis of Bone Lesions," which was discussed by Drs. Keith, Aud, J. B. Murphy, and the discussion closed by the essayist.

CYRUS GRAHAM: We have with us today a Kentuckian who is the oldest living ex-President of the Kentucky State Medical Association, who practiced medicine fifty years ago in our State, and is honored and respected wherever he is known and presided over this Association at the dedication of the McDowell monument—Dr. Todd, of Owensboro. I move he be invited to take a seat on the platform. (Applause.)

Motion seconded and carried.

THE PRESIDENT: All Kentuckians are delighted to honor members of their own profession who have attained positions of eminence and pre-eminence.

I will appoint Dr. Graham to escort Dr. Todd to the platform.

C. H. TODD: Gentlemen of the Kentucky State Medical Association: I feel honored in being before you today. I can hardly realize that twenty-seven years have elapsed since I was elected President. In that time I have practiced medicine and am doing so to-day. I thank you. (Applause.)

W. Hamilton Long, Louisville, read a paper on "The Limitations of Nitrous Oxid-Oxygen in Surgery and Its Recent Use in Obstetrics," which was discussed by Dr. Speidel, and, in closing, by the essayist.

W. L. Gambill, Jenkins, followed with a paper on "Surgery of the Infected Hand," which was discussed by Dr. Carpenter, and the discussion closed by the author of the paper.

Lillian H. South, Bowling Green, gave a talk on "Rabies," which was illustrated by numerous lantern slides.

Discussed by Drs. Sherrill, Carpenter, Simpson, Gaither, Poole, Richardson, Aud, Dixon, and the discussion closed by the essayist.

THE SECRETARY: We have with us today Colonel Maus, the new Secretary of the State Tuberculosis Commission, one of the

creations and activities of this Association in its broad and largest sense. Colonel Maus wants to know every one of you individually. He needs your aid in helping to solve one of the greatest problems we have in Kentucky to-day, and I ask unanimous consent that Colonel Maus be given time to speak to this splendid audience so that you can know him better.

Motion seconded and carried.

COLONEL MAUS: Mr. President and Members of the Kentucky State Medical Association: I feel it a great privilege to have the pleasure of meeting you here under such favorable circumstances. Although a Marylander by birth, I feel I am no stranger to Kentucky, because about forty years ago I was stationed in Frankfort as a medical officer at the time when the Yandells and Rogers and Miller and many famous men of your city, who have passed away, were in the zenith of their glory. One of the most important events of my life that has moulded my course more than anything else is, I took unto myself one of Kentucky's fairest women as a bride, and I assure you, although forty years have passed away, that wherever she has gone, whether at home or abroad, she has added to the luster and fame of her glorious state. (Applause.)

I really feel honored in having been appointed Secretary of this Tuberculosis Commission, although I must say it did not come of my own seeking. I have been retired from the active list of the United States Army after forty years of service, and I have been interested in the great health problems of our country, and wherever I have been it is my intention to take a deep interest in one of the greatest health problems of your State, namely tuberculosis, which, I am sorry to say, is more or less neglected throughout the entire United States.

I have been but a few days in this position, and I have not informed myself as well as I should have done as to what is being done here. From twenty-five to thirty thousand cases of tuberculosis exist here, with a death list of five thousand cases each year. Kentucky stands about third in the Union in proportion of deaths per hundred thousand from this cause. I am sorry to say the activities of the State have been small indeed. I have studied the question somewhat throughout the United States in the years past; I find many of our states, large and small, have done a wonderful amount of work along tuberculosis lines. Even small cities have been spending millions of dollars in this worthy cause. You are all aware of the Tuberculosis Act and its scope and prerogatives. I am sorry to say, that very little has been accomplished beyond

that of publicity in the State, although the Commission was authorized to ask the Fiscal Courts to build sanatoria in the various counties and districts. It is a great problem of how to handle tuberculosis in every state. You cannot handle it by one means alone. It is hoped that we will have well organized county and district sanatoria. It may be well to organize some state sanatoria, but we do know that the first thing is to make the people of the State acquainted with the dangers of the disease. Eighty per cent. of the cases in this State belong to the ignorant classes who know nothing whatever of this disease, and they are rotting away and poisoning their neighbors with this disease. In the homes mothers with tuberculosis sleep with their children, so that the elementary work on tuberculosis has scarcely been begun in this State. Very little has been done beyond sending visiting nurses to centers where it was the worst, with a view to trying to enlighten the people and to organize health societies for its amelioration. We hope after a little while Kentucky will wake up. I want to meet the physicians of Kentucky; I am a physician myself; I am the son-in-law of a Kentuckian and practically your brother-in-law, and every Kentuckian here who is a son of the State is practically a brother-in-law of mine as far as the profession of medicine is concerned and by my connection with the State through marriage. Therefore, I ask you to assist us in this great work. The Governor of the State and all members of the Commission are anxious to do something.

I thank you for allowing me these few minutes to speak to you, and I am very glad to meet with you all. I hope to be able to shake hands with all of you in your own counties at your own homes and get better acquainted with you. I ask you to help me and your State and the people in cleaning up this State. If we can reduce the death rate from tuberculosis fifty per cent. in the next four or five years if we all set our hands to the wheel. I thank you very much. (Applause.)

John R. Wathen, Louisville, read a paper entitled, "The Present Status of the Surgical Treatment of Goiter," which was illustrated by numerous slides.

The paper was discussed by Drs. Jno. B. Murphy, Sherrill, Spaulding, and Hume.

J. T. McClymonds, Lexington, read a paper on "Medical Aspect of Diagnosis and Treatment of Gastric and Duodenal Ulcer."

J. G. Gaither, Hopkinsville, delivered the Oration in Surgery. He selected for his subject, "A Plea for Uniformity of Treatment in Undoubtedly Surgical Diseases."

On motion, the Association adjourned until 2:00 P. M.

SECOND DAY—AFTERNOON SESSION.

The Association re-assembled at 2:00 P. M., and was called to order by the Secretary in the temporary absence of the President.

M. Casper, Louisville, read a paper on "Gastric and Duodenal Ulcer; Surgical."

W. W. Anderson, Newport, read a paper on "Digitalis; Its Indication and Manner of Use."

Discussed by Dr. Askenstedt.

Hon. Fred Forcht, Louisville, read a paper entitled, "The Legal Status of the Physician and Surgeon."

J. N. McCORMACK: I move that the thanks of the Association be tendered to Mr. Forcht for his able paper and for his fidelity and the ability he has displayed in managing the affairs of the Association in his particular field.

Motion seconded by several and carried unanimously by rising vote.

W. W. ANDERSON: I would like to make a further motion in regard to this paper, namely, that we recommend to the Editor that it receive early publication in *THE JOURNAL*, and that our members call attention of their brother physicians at home to this article when they return and when it is published.

Seconded and carried.

W. S. SANDBACH: Inasmuch as *THE JOURNAL* is only mailed to the members of the Association, and these remarks are of unusual interest to non-members as well as members of the Association, I would like to suggest that our Secretary mail a copy of the issue containing Mr. Forcht's paper to every physician in the State, whether he be a member or not.

Seconded and carried.

J. T. Reddick, Paducah, read a paper entitled "Difficult Presentation," which was discussed by Edward Speidel.

Edward Speidel, Louisville, gave a demonstration in obstetrics, using many splendidly selected lantern slides.

John B. Murphy, Chicago, a distinguished honorary life member, gave a talk on "Fractures," which was illustrated by numerous lantern slides. Upon motion, and amidst applause, by a rising vote, the thanks and gratitude of the Association were extended to Dr. Murphy.

G. S. Hanes, Louisville, followed with a paper entitled, "Importance of Posture in Diagnosis, Operations and Treatment of Lesions in the Rectum and Sigmoid," which was illustrated by lantern slides and motion pictures.

THE PRESIDENT: The thanks of the Association are due to Dr. Hanes for this original and unique way of demonstrating to the members of the Association the latest methods of rectal specialists.

A. H. Barkley, Lexington, read a paper entitled, "A Brief Review of the More Conservative Surgery of the Female Generative Organs."

These two papers were discussed together by Drs. Carpenter, Mathews, Sherrill, Graham, Stewart, Asmau, Frank; after which the discussion was closed by Dr. Barkley.

At the evening meeting held at the Seelbach Hotel, President Kincaid delivered his Address.

On motion, the Association adjourned until Thursday, 9:00 A. M.

SEPTEMBER 23, 1915—THIRD DAY—MORNING SESSION.

The Association met at 9:30 A. M., and was called to order by the Vice President, C. L. Heath.

Curran Pope, Louisville, read a paper entitled, "Therapeutic Measures Other Than Drugs."

The paper was discussed by Drs. Boggess, Solomon, Weidner, and the discussion closed by Dr. Pope.

E. W. Jackson, Paducah, read a paper entitled "The Use of Iodine and the Iodids in Medicine," which was discussed by Drs. Stewart, Pope, Morrison, Willmoth, Fort, Solomon, Jackson, Kincaid, and the discussion closed by the essayist.

A. L. Thompson, of Madisonville, read a paper entitled, "Heart Complications in Acute Infectious Diseases."

W. F. Boggess, Louisville, followed with a paper entitled, "A Review of Conditions Resulting from Cardio-Vascular Disturbances With or Without Organic Changes in the Heart and Vessels."

J. R. Morrison, Louisville, read a paper on "Syphilis of the Heart."

These three papers were discussed together by Drs. Solomon, Pope and Dowden.

At the conclusion of the discussion the Association went into Executive Session for the purpose of listening to a very important communication from W. L. Heizer, State Registrar of Vital Statistics.

I. N. Bloom, Louisville, read a paper entitled "Intensive Treatment of Syphilis."

Discussed by Drs. McCormack and Pope, and discussion closed by the essayist.

Herbert Bronner, Louisville, read a paper entitled "Chronic Prostatitis."

George H. Day, Louisville, followed with a paper entitled "Verumontanum (with lantern slides)."

These papers were discussed by Dr. McKenna.

At the conclusion of this discussion the President said:

Having finished the reading and discussion of the last paper on the program, I want to

thank you gentlemen for the consideration which you have given me in presiding over your deliberations and for the close attention which you have given to the papers and discussions. I thank you very much. (Applause).

I. N. BLOOM: I move that a vote of thanks be extended to the retiring President, Dr. Kincaid, and to the other officers for the able manner in which they have conducted the meetings of this Association.

Seconded and carried.

As there was no further business to come before the meeting, on motion, which was duly seconded, the Association then adjourned *sine die*.

ARTHUR T. McCORMACK, Secretary.

OFFICIAL MINUTES OF THE HOUSE OF DELEGATES OF THE SIXTY-FIFTH ANNUAL MEETING OF THE KENTUCKY STATE MEDICAL ASSOCIATION, HELD AT LOUISVILLE, SEPTEMBER 20, 21, 22, and 23, 1915.

MONDAY, SEPTEMBER 20,—FIRST MEETING.

The House of Delegates met at 2 P. M. and was called to order by the President, John J. Moren, Louisville.

THE PRESIDENT: The first thing on the program this afternoon is the report of the Committee on Credentials, E. L. Henderson, Chairman.

E. L. HENDERSON: We have looked over the roll and found the list of delegates are the accredited delegates from the various counties.

THE SECRETARY: I would move that when the House of Delegates adjourns, that it adjourn in honor of Dr. U. L. Taylor, duly elected delegate from Adair county. During an epidemic of diphtheria Dr. Taylor traveled all over the county at the very advanced age of eighty-five, and in so doing contracted pneumonia and died within a short time. So when we adjourn, I move that we do so in honor of this premier health officer of the State. He was county health officer for a longer continuous period than any other.

Seconded and carried.

The Secretary called the roll and announced a quorum present.

THE PRESIDENT: The next on the program is the reading of the Minutes of the House of Delegates of the 1914 session.

E. L. HENDERSON: I move that the reading of the Minutes be dispensed with, as they were published in full in the JOURNAL.

Seconded and carried.

THE PRESIDENT: The report of the

Committee on Scientific Work, Dr. Kincaid, Chairman.

THE SECRETARY: The Committee on Scientific Work desires to submit the program as its report, and the only change is that the address of the President will be delivered at the Seelbach Hotel as will be announced later by the Chairman of the Committee of Arrangements instead of in the morning.

THE PRESIDENT: The report of the Committee of Arrangements.

THE SECRETARY: I move that the report of this committee be deferred.

Seconded and carried.

THE PRESIDENT: The report of the Council.

The Secretary read the report of the Council. (See page 421, *KENTUCKY MEDICAL JOURNAL*, September 1, 1915.)

THE PRESIDENT: This report goes automatically to the Reference Committee on Report of Officers.

The following list of the Reference Committees was announced by the President:

Insurance—T. A. Frazer, Marion; Warren Montfort, Frankfort; W. H. Gibson, Lerose *JOURNAL*—Owen Carroll, Newcastle; W. B. Owen, Louisville; W. C. McCauley, Versailles.

Credentials—E. L. Henderson, Louisville; T. R. Welch, Nicholasville; Leigh Maupin, Magnolia.

County Societies—C. H. Linn, Kuttawa; J. C. Graham, Webbs; W. E. Foster, Owen-ton.

Principles of Ethics—E. Duff Burnett, Anchorage; Harmon Nash, Finchville; S. S. Brown, Mountain Ash.

Constitution and By-Laws—J. C. Moseley, Henderson; F. P. Strother, Madisonville; J. B. Scholl, Jabez.

Public Health—C. L. Heath, Lindsay; S. J. Smoek, Glasgow; J. T. Reddick, Paducah.

Anti-Tuberculosis—Dunning S. Wilson, Louisville, P. D. Gillim, Owensboro; H. G. Davis, Marrowbone.

Election of Guests—S. G. Dabney, Louisville; G. H. Albright, Barboursville; J. W. Stone, Henderson.

Division of Fees—Milton Board, Louisville; G. P. Grigsby, Louisville; R. C. MeChord, Lebanon.

Reports of Officers—C. A. Vane, Lexington; W. A. Guthrie, Franklin; L. S. McMurry, Louisville.

Finance—L. C. Redmon, Lexington; J. R. Cowan, Danville. A. W. Walden, Owingsville.

Resolutions—A. Scaggs, Morehead; Jacob Schuliz, Logmont; W. C. McCauley, Versailles.

Contract Practice—D. C. Donan, Jr., Morganfield; S. S. Brown, Mountain Ash; Lee Chestnut, Mount Vernon.

State Medicine—J. F. Young, Monticello; B. C. Wilson, Clarkson; J. F. Knox, Bowen.

Propaganda and Reform—S. J. Meyer, Louisville; L. S. Givens, Cynthiana; J. J. Adams, Munfordsville.

THE PRESIDENT: The next order of business is the report of the Secretary. (See *KENTUCKY MEDICAL JOURNAL*, September 1, 1915, Page 424.)

THE PRESIDENT: The Secretary's report will be referred to the Reference Committee on Reports of Officers.

We will next have the report of the Treasurer.

W. B. McCLURE, Lexington: The report of the Treasurer and the report of the Secretary are so intimately connected that it is impossible for one to make a report without reporting on both. You have heard, Mr. President, Dr. McCormack's report which embraces mine.

I will say this, that my nerve strain was much relieved when I got a report from the auditor saying that our books balanced to a cent. This was a great relief. We are very proud of our financial showing this year, and I want to say to the members, if they will quit having damage suits against them, we will soon be on easy street. You will observe that we made a great deal of money this year out of the *JOURNAL*; and the medico-legal branch ran a little behind, so you see where the bulk of our money is going. I do not think that there is anything else that is necessary to say, but I want to emphasize what Dr. McCormack has said, that every member ought to go over the voucher checks, and if there is any item he is in doubt about, he ought to inquire and see what that money was expended for. He should get hold of the voucher check and see what it is for.

THE PRESIDENT: This report will likewise go to the Reference Committee on Reports of Officers.

We will now have the report of the Business Manager.

LILLIAN H. SOUTH. Bowling Green, presented her report as Business Manager. (See *KENTUCKY MEDICAL JOURNAL*, September 1, 1915, Page 434.)

THE PRESIDENT: This report will be referred to the Reference Committee on Reports of Officers.

We will now have reports from the councilor districts.

REPORT OF COUNCILOR OF THE FIRST DISTRICT.

W. W. RICHMOND: The following is a correct report of the present membership of the First District of the Kentucky State Medical Association, and a report of the non-members, including the physicians who, in the past

year, have died, retired from practice and those who have moved out of the district.

Number of physicians originally reported, 303; number in the First District to date, 213; number of non-members heretofore reported, 90; number who have died, retired and moved, 47, and the number of eligible non-members to date 43.

I obtained the above figures from the secretaries of the 12 county societies in the First District and from the secretary of the State Association. The report of the State Secretary which is published in the September number of the JOURNAL does not correspond with this report for the reason that the Secretary in his published report omitted Trigg County Medical Society which reported five members. Adding the five members from the Trigg county society and a mistake in the addition in the Secretary's report of one member, adds 6 to the report, raising the membership of the First District from 207 to 213, an increase of one member over the membership of the past five years.

A membership of 213 with only 43 non-members shows the First District to be in a good condition, comparing favorably with other districts in the State.

True, we have some county societies which, though well organized, are not doing the active work they should do. This is partly due to the fact that they do not meet often enough; some of them only meeting once every three months, which is not often enough to keep the society interested in active work. A county society should meet once a month. It should have an active secretary, one who is willing to go out after members. The councilor should visit each society once a year. He should keep in touch with the secretaries and encourage them to greater efforts in getting the members to attend the meetings; he should communicate with the delinquent members, encouraging them in society work. In this way county societies can be maintained and the members educated to the importance of organization.

In the First District the county societies are all good, but a few are better than others. among the latter I desire to mention a few which deserve notice. Graves County society is one of the best in the State, mainly due to the untiring efforts of a live secretary, Dr. H. H. Hunt, who has no superior as secretary in the State. Lyon County has two stars, indicating that every doctor in the county belongs to the society. Carlisle County is one of the best. McCracken county is another good one with a large membership, a good secretary, and is doing splendid work, right up to date with peace and harmony reigning. Last, but not least, Hickman County, my

native county, with every doctor enrolled but one and he is an eclectic and preacher, doing more preaching than practice. He once belonged, but quit to save souls instead of lives.

THE SECRETARY: Dr. J. D. Brooks, of Paducah, a former president of the Association, is at Dr. Board's Sanitarium in this city dangerously ill, and I move that the President and Secretary send him some flowers with the good wishes of the Association; and that the President and Secretary be members of a Committee to draft a telegram to Dr. Hancock also an ex-president of the Association, who is at present dangerously ill at his home in Henderson.

Seconded and carried.

THE PRESIDENT: Report from the Councilor of the Second District.

CYRUS GRAHAM, Henderson: I thought I had my written report in my pocket, but I find I have not. It is very difficult to keep up with Dr. Richmond because he is in a class by himself. We have in the Second District 396 doctors, 228 members and 167 non-members. During the past year I have made several visits to different places in the district, and wherever I have gone I have met with a pleasant reception. The doctors all seem to be doing their duty and, as we all know, the success of any society depends very largely upon its secretary. Several times I have written to the members that I would be there and they have asked me to come, and yet I have found it hard sometimes to get a meeting. One secretary of one of our county societies, one of the best in the district, told me that it was the hardest work he had ever done in his life. He said that practicing medicine was simply Sunday School work as compared with being a secretary of a county medical society. However, I think the Second District is doing pretty well. We have had several deaths and several physicians have moved away, but still I feel hopeful that we will do much better in the future.

REPORT OF COUNCILOR FROM EIGHTH DISTRICT.

J. E. WELLS, Cynthiana: In making my report as Councilor of the Eighth District it gives me much pleasure to report a number of counties in a flourishing condition. Bourbon County had a rousing meeting on the 16th instant. They have adapted the plan of feeding the inner man and it seems to work well with them.

Campbell-Kenton we are always proud of because they have the quantity as well as the quality. One hundred and eighteen members reported this year, an increase of eleven over last year.

The attendance and interest in the society's work has been good all the year; during the

heated term instead of disbanding, they held outdoor meetings in July, August and September. And these meetings have been the best attended of any during the year, averaging fifty to eighty-five. I only wish all the counties were doing as well as Campbell-Kenton. They take a pride in the work they do and have a first class secretary which is very important.

Mason County has a membership of 21, and they meet each week. Members do not take the interest they should. Mason county should have a better society, as they have good men and a good secretary.

Scott County certainly deserves to be mentioned among the good ones. They have a membership of 21, which is every physician in the county. The average attendance is 14. They meet monthly and each member is interested in the work and endeavoring to make the society better. They have clinical meetings with patients present. Scott county is beginning to claim to be one of the best. They have a good secretary which makes or at least helps to make, a good society.

Pendleton County has been of the best smaller county societies in the District. They meet regularly but the same interest is not shown that they formerly had. They are doing good work and have a good secretary, who reports as many meetings as any county of the size in the State.

Jessamine, Woodford, Fleming, Nicholas, Grant and Robertson all have organizations, but do not meet regularly, nor do as they should, all having good material. Bracken has no organization, but some four or five keep up their dues. I have made a number of efforts to organize Bracken County and to keep them at work, but have failed.

Last, but not least, good old Harrison never misses a meeting; we lose some by death and some by removal; others come to take their place, and we 'go on' like Tennyson's brook.

We have the best members, the best interest, the best secretary, and the best all around good fellows of any county in the State!

The interest taken by our members is giving good results, and our citizens have become interested and enthused in our work and join us in fighting germs and contagious diseases, and look after their health before the malady takes hold. This aids us greatly in the treatment of patients, and tends toward giving better and quicker results, and prevents the spreading of contagious diseases which proves much more satisfactory and beneficial to the people of our county.

Judging from the interest taken in our society by the citizens of Harrison county. I believe the time is near at hand when the good thinking and reading people of our

State will demand of the members of our profession, that we come closer together and work shoulder to shoulder in an attempt to keep our people well, and prevent disease, rather than use our skill and science to make them well after they have become diseased and invalids. These matters can be brought about through and by our county societies and when once organized with the proper interest and feeling of the profession, we will have no trouble in getting aid and help from our citizens to bring about the desired result.

REPORT OF COUNCILOR FROM TENTH DISTRICT.

I. A. SHIRLEY, Winchester: There are seventeen counties in the Tenth District, all but four of them being mountain, and yet to show up 14 on the 100 per cent. list, and two have enrolled every eligible physician. I mention so many of them as being in the mountains because on account of the condition of the roads for about one-third of the year, it makes it practically impossible for the physicians living there to get to the meetings. Elliott, Lee and Montgomery have the same number of members as last year, while Breathitt, Clark, Estill, Fayette, Madison, Menifee, Morgan, Perry and Rowan show an increase over last year, yet for some dark and bloody reason the secretary kept from us our net gain over last year which we think is thirty, forty or perhaps fifty. Two of our counties, Owsley and Powell, have three stars in their crowns showing every eligible physician within their borders on the membership list. The three counties that failed to land—Bath, Letcher and Knott—did not intend it and labored under very adverse circumstances and will no doubt be in the front rank next year. In quite a number of the counties the meetings have been rather irregular, and the attendance has not been what it should have been, but with the advent of cooler weather, and the inspiration that will naturally come from the present meeting, we hope to hear of a better attendance. The great trouble as well as the difficulty in getting efficient secretaries with tact and industry has always been the bugbear of medical meetings, and the fact that no medical society can possibly succeed without the above, should persuade members to set aside all personal preferences and go for the man known to be the most effectual. But after all, I am persuaded that we are slowly but surely getting better, and while there may not be much hope for the rest of the State, the Tenth District is determined to do better and better as the years roll by. It has not been so many years ago since a certain county in this good old State was constantly being held up to the rest of us as a model county society in numbers attending, in postgraduate work, and especi-

ally did they crow loud and long about having every physician in the county on their roster. It was nothing more than natural that such great and good things should come from the county where the celestial heads of the McCormacks rested every night, and where the foremost lady doctor (Dr. South) was to be found. Heizer, Rau, and Blackburn, the latter having been selected by the highest medical organization in the land to tell us how to teach, preach and absorb post-graduate ideas, also honored it with their residence. Do you notice, Mr. President, that this once leader and teacher failed this good year of 1915 to so much as get on the list of counties as having as many members as last year? Failed to land, is entirely off the map, and with anguish and much heaviness of heart, we ask: "Where, oh! where, is Warren County?"

REPORT OF DELEGATES.

CHRISTIAN COUNTY MEDICAL SOCIETY.

W. S. SANDBACH, Caskey: The present year has been one of the most progressive years in the history of the society. We have lost three members by the non-payment of dues, one by moving out of the State, and we have enrolled nine new members, making our present membership 51. We only have four eligible practitioners, two at the Western State Hospital who are not members. We have held twelve meetings with two all-day meetings, with a total of twenty papers, twenty-seven case reports, and eleven clinical cases. We have had one all-day joint meeting with the druggists of the county. That in substance is the principal part of the work that has come before our society.

As secretary, I wish to say that in my fifth year I have had no trouble at all in securing programs for our meetings. The first year I had quite a task in getting papers for our program. During the present year, according to the statement made by the State Secretary, the members are paying up promptly. We have a few on the delinquent list that are behind after April 1st. One member has paid his dues twice, and the secretary has not returned them. However, at the present time we are in a more prosperous condition as a society than ever before. With the coming year I am sure we will enlist the ones we have failed to get so far.

J. PAUL KEITH, Hopkinsville: Our County Society owes its success largely and mainly to Dr. Sandbach, and if there are any brothers scattered over the State you ought to get them for secretary. He certainly is a live member. We have had a program every month, but usually a good one.

THE SECRETARY: Distinctions cannot be made without being more or less invidious, but Christian county has done work that many other societies should be jealous of. They have so conducted their affairs that when the problem of tuberculosis was submitted to the county they showed their confidence by casting an overwhelming majority vote for the establishment of a tuberculosis sanitarium. The friendly feeling between the doctors around there is delightful.

J. PAUL KEITH: With reference to professional unity, I wrote recently to the State Board of Health saying we had a nurse and she has been there about two weeks. I read in my own town paper this morning they have guaranteed a nurse for one year in that county. Not only that, we have a movement on foot at present to have a full-time health officer in Christian County by 1916, whether anybody else has or not.

FAYETTE COUNTY MEDICAL SOCIETY.

L. C. REDMON, Lexington: Our membership at present is 72, an increase of four or five over last year. We have lost three of our members by death, Dr. Wiley, Dr. Morrison and Dr. Coleman, a former president of the State Association.

We have had a meeting every month; we have had two or more papers and clinical papers. There is a scheme on foot and in the hands of the committee to have two meetings a month, one with a scientific program, and the other two weeks later a clinical meeting. We have membership that is united. We have some physicians who are not members, and the organizer for the American Medical Association came into Fayette county and secured six applications that I could not secure, but when we balloted on them no one of the six paid his dues. I had some trouble with them before. (Laughter.)

Fayette County is booming as far as membership is concerned. We expect to increase it from time to time. Our meetings are interesting. The social features of our meetings of the last two years have been delightful. We have arranged dinners at doctor's homes, card parties and picnics, which stimulate interest. We have had five visitors from adjoining States to read essays. This also stimulates interest. We make a special effort to invite brethren from surrounding counties to attend our meetings. All things considered, Fayette county is very prosperous.

W. B. McCLURE, Lexington: Some gentleman has said that Christian County has the best secretary and so on. I want to say to you, that Fayette has a secretary—I won't say he is the best, but he has no superior. He

is not only able to arouse interest in the society, but he has been largely instrumental in bringing about a feeling of harmony and good will that has never existed before during his incumbency in that office. Dr. Redmon has no superior as a secretary. (Applause.)

THE SECRETARY: I will say frankly, all of these gentlemen are very fine secretaries, but I know some of the little difficulties connected with their work. One of the best of them does not make any report of the Minutes to the State Journal. Another one of the best secretaries collects more dues in proportion to the profession in his county than any other secretary, and he sent in the dues on last Sunday morning before the meeting in a special delivery, addressed to the secretary, with a check for the money, and his members do not get the JOURNAL until the first half of the year. All these secretaries are fine men and deserve to be encouraged in the good work they are doing.

HENDERSON COUNTY MEDICAL SOCIETY.

J. W. STONE, Henderson: As delegate from the Henderson County Medical Society, I wish to make the following report: Our programs are printed for the year. Our meetings are held on the 2nd and 4th Monday evenings, except July and August, in which we have no meetings. There has been a quorum present at every meeting except two. We have had an average attendance of seven members. There has been a paper read at most of the meetings, and they have been freely discussed. There are about eight or ten members who are trying to keep the society alive, and they have succeeded. The program committee promised a paper at every meeting, and we have so far kept our promise, save one or two meetings.

HOPKINS COUNTY MEDICAL SOCIETY.

A. O. SISK, Earlington: The regular delegate from Hopkins county is not here. I have no written report, but we have had six meetings this year. One of these meetings has been interesting and instructive. The greatest trouble with Hopkins county is getting the doctors to attend the meetings and getting them to prepare papers and issuing a fine program. We have trouble in collecting the dues promptly. During the first of the year dues should be paid, but most of the members wait until the last minute to pay their dues. However, the secretary has endeavored to get a star for Hopkins county. We still have 100 per cent. if I am not mistaken.

LAUREL COUNTY MEDICAL SOCIETY.

Oscar D. Brock, London: We have about eighteen active members in our county, or practitioners rather, with fifteen members of

the society. We meet quarterly. During the winter our roads are very bad and the doctors cannot get into town, and we do not have meetings very often. As soon as we get the Dixie Highway we will be able to do more work. We have one retired practitioner who does not belong to the society. The Trachoma Hospital is doing good work for the whole section of the county.

LAWRENCE COUNTY MEDICAL SOCIETY.

J. J. GAMBILL, Blaine: I hardly know what to say. Dr. Hayes, our secretary, was to represent our county. At the last meeting after he found he could not come, he asked me to do so. I had a letter from him Thursday, saying he could not be here and would like me to come.

We have had three meetings since we organized. We meet on the third Monday of each month. Our last meeting was held at Blaine where I live. The next meeting will be held in the eastern part of the county. It is a long way there and the roads are bad, a good meeting and to get the members in but we are going to do what we can to have line. There are 22 or 23 doctors in our county. I do not know how many belong to the society.

THE SECRETARY: Eleven.

J. J. GAMBILL: There are some fellows who do not believe in progress, but we are going to try and do our best to get them in line.

THE SECRETARY: Those of us who feel like complimenting Christian County, Hopkins County and Fayette for their work, where they have splendid organizations and have been running for a period of years, cannot but feel astonished at what Dr. Gambill reports of the backward condition in Lawrence county, one of the best in the State, but it is interesting to note as the report shows, that marked progress is being made by those who are familiar with medical organization affairs of the State. For fourteen years practically no membership has been reported in the Lawrence County Medical Society up to this year. This year they have eleven members. They have the nucleus of a good working society. They have splendid men and a splendid county. They have permitted a lot of men who are not modern physicians in many ways to dominate matters in the county to an extent of bringing about a state of disorganization that is almost pitiful. These young men are doing their best to get together and bring order out of chaos, and they deserve our hearty support and approval.

J. J. GAMBILL: We have many cases of

diphtheria and scarlet fever and other contagious diseases in our section of the county, and we have notified the Board of Health of these cases. Last week I had eight cases of diphtheria. I succeeded in closing three schools, on account of this disease, although I had some difficulty in doing it.

LYON COUNTY MEDICAL SOCIETY.

C. H. LINN, Kuttawa: The Lyon Medical Society has two stars in its crown. We have only nine physicians in the county. Our membership is of a higher order. We are above the average in membership. I think there is hardly a physician in the county who is eligible as a member who is not interested in the progress of the medical profession and is anxious to learn and to commune with his neighbors, and the only reason we do not have meetings oftener is because our society is so small. It is not much trouble to get a program, the same men come around in rotation very often, but sometimes I think we are not enthusiastic about our meetings. We have not had over five meetings this year. We have telephones and we have the man who is down for a paper inform us that he is going to be out of town out of courtesy to the other members, and we may or may not have a meeting. Aside from that, I think we are above the average county medical society.

The only possible thing that I can report that is unfavorable in our society is that some of our members get a little mixed up in their cases occasionally, and they think that this or that doctor is getting some of their business and that they are not being treated with professional courtesy. We are like the Mexicans, if you interfere we might rebel and turn against the society. We want to stand in pleasant relations to the parent society and settle our own affairs at home.

THE SECRETARY: I would like to ask unanimous consent that both delegates from McCracken County make reports. I make that as a motion.

Seconded and carried.

MCCRACKEN COUNTY MEDICAL SOCIETY.

J. L. REDDICK, Paducah: I have not a written report, and therefore can only make a brief verbal report. In the first place I desire to thank Dr. Richmond for the kind reference to McCracken county, and it is hardly to be expected otherwise that some nice things might be said of McCracken as it is in the Gibraltar district of which Dr. Richmond is Councilor.

McCracken county has a lot of doctors and a fairly good county medical society. Of course, there is room for improvement along various lines. I think we report a membership of 45, which entitles us to a star, it be-

ing a larger number than was reported last year. There are ten or a dozen doctors yet who ought to be members of the society. One or two of them are ineligible. It is hard to get those who are eligible into the society. I found that out when I was secretary several years ago. There are a few who still remain outside of the benefits of this society. We are holding meetings bi-monthly during all the year except the extremely hot months in the middle of the summer. Our meetings this year have been especially well attended, and we have been fortunate enough to have good papers and spirited discussions. We have reported a few papers and discussions in the JOURNAL.

A short time ago we had a joint meeting with the Marshall County Medical Society, we had two papers from McCracken county, and two from Marshall county and a barbeque dinner. The doctors of McCracken county have been forwarded for a number of years along certain lines. It was one of the first counties to have a tuberculosis sanitarium. The matter is to be submitted to the voters as to whether the county shall take this sanitarium over or not. The doctors of Paducah were instrumental a few years ago in having an issue of bonds voted to erect a first class hospital and training school which has been in existence a number of years. It is doing an immense amount of work in the training of nurses. The members of our society give lectures to the high school pupils on health problems. There is yet room for improvement along the lines of harmony and scientific improvement, but I presume we have the average county medical society.

I quite agree with what has been said that the office of county secretary is a hard position to fill. I had to advance the dues of six or eight or ten members in order to get them in, but I was reimbursed. You have got to telephone and write them personal letters; they put off the payment of dues until the last moment, so it takes a great deal of hard work on the part of the secretary.

H. G. REYNOLDS, Paducah: Dr. Reddick has really covered the essentials in regard to our county medical society, so that he has left little or nothing for me to say. I wish to make this remark, however, that if the members failed to pay their dues Dr. Reddick is able to pay them. I do not know whether the other secretaries can do that or not. (Laughter.)

SIMPSON COUNTY MEDICAL SOCIETY.

W. A. GUTHRIE, Franklin: We have about fifteen physicians in Simpson county, and about nine or ten are located in one particular section. We have twelve members

who have paid dues. This is better than last year, and we are entitled to a star. We have some very good meetings. We do not meet as often as we should. Everything looks brighter for us, and we will try to do better next year. We have a good secretary who does his duty to the best of his ability. We have several old men who take no special interest in the work, and there is always some discord and trouble. We feel encouraged this year and we will try to do better next.

SCOTT COUNTY MEDICAL SOCIETY.

J. E. PACK, Georgetown: Scott County being a small one, we have eighteen regular practitioners of the regular school. We have two other physicians in the county who are physio-medicalists. We have solicited these gentlemen to join, but they never come to our meetings and of course are not members. Of the eighteen regular physicians, there are fifteen members. I believe there are just thirteen who have paid dues this year. Two members have not paid their dues up to date. A few of the eighteen live eighteen miles from the county seat where we hold our meetings. It is almost impossible for them to come except when the roads are good; but for a small county and considering the number of physicians, we usually have good meetings. If a few get together we hold a meeting. If the essayist is not present we have every man report a case and discuss the cases. The secretary has a hard time in trying to work up interest and to get the members to attend the meetings. It is a hard job to hold any county society together and to keep the doctors in good humor and get them to pay their dues and attend the meetings regularly. Sometimes we are short one or two meetings because the secretary is not able to be there. I have thought a great deal about the propriety of having an assistant or secretary pro tem, so that if the regular secretary is not able to attend the meeting the secretary pro tem can stimulate the other members to do so. It seems we are dependent upon whether the secretary goes or not in order to have a meeting. A good feeling exists among the doctors, and we are all on good terms. Until last year such a feeling did not exist. I have been instrumental in bringing about a reconciliation between some of the members. In justice to our secretary, I will say we have three members who go to Dr. Sandbach's county society, and notwithstanding we have our regular meetings, they love to go to the Christian County Medical Society meetings because they have a good society there, they have good meetings and we have more members from our county because they have doctors enough to have a good meeting.

WHITNEY COUNTY MEDICAL SOCIETY.

C. A. MOSS, Williamsburg: I am not a regular delegate, I am alternate, and I have no written report. I have been secretary for three years, and during that time we have held one or two meetings during autumn. There is no secret in collecting dues. Our society is sure of having its meetings and of having papers read. I have tried a little of everything to have good meetings, but on account of the nature of our country and the train service it has been difficult to do so. I feel encouraged after what Dr. Sandbach has said about getting up good programs.

HARRISON COUNTY MEDICAL SOCIETY.

L. S. GIVENS, Cynthiana: The Harrison County Medical Society held eleven regular and three special meetings during the past year. The July meeting was omitted on account of Chautauqua. The average attendance has been fifteen. We have now 24 members. We have lost two by death during the past year. The number of cases reported 33; number of papers read 14. Our July meeting is the only one omitted since our reorganization in May, fourteen years ago. I am almost safe in saying that every eligible physician in Harrison county is now a member of our society. We are happy and contented.

DAVIESS COUNTY MEDICAL SOCIETY.

J. J. RODMAN, Owensboro: The number of members in good standing at the time of the last annual report was 69. Since that time two have removed from the county and one other has left. Three new members have been admitted, making 69 at this writing, the same as the last report.

The meeting has not been attended quite so well as last year, the average attendance being thirty-five. It has been harder than ever before to collect dues, the cause of which is not certain. Perhaps it is the European war, as that is the bete noir that causes all our aches.

Some of our members are very enthusiastic as shown by the good papers published in the JOURNAL. The JOURNAL is well worth the two dollars. One of our members would not be without the insurance section now for all it costs the society. It may be your time next year. He pays promptly and so has the protection for the full year.

CAMPBELL-KENTON COUNTY MEDICAL SOCIETY.

G. J. HERMANN, Newport: The Campbell-Kenton County Medical Society desires to report that the past year has been a very successful one.

Our meetings are held on the first and third Thursdays of each month, having been well attended and much interest shown. Instead of disbanding during the heated term, we have held outdoor meetings in the country, four in number, and these have proven very successful. Our attendance has ranged from 50 to 85. These meetings tend to let the physicians get better acquainted and breed good fellowship.

The Committee on Publicity of the society delivered a full course of lectures on tuberculosis, the social evil and kindred subjects.

We have as usual the pleasure of reporting an increase in membership, something we have never failed to do since our organization. We now have 118 members, an increase of 11 over last year. We had 70 new members join us during the year and lost 6, one by removal, one by request, and four by non-payment of dues.

We have eighteen druggists associate members. We find that by making the druggists associate members it has created a better feeling between the two professions and a help and assistance to both.

OLDHAM COUNTY MEDICAL SOCIETY.

E. D. BURNETT, Anchorage: Since we met in Newport, we have experienced some of the prodromal syndromes of an early demise. Professional work has been abundant, but ready cash has been reduced to an unknown quantity. But our vigor to-day is normal.

Oldham County Medical Society has had several good meetings. While the brethren do not live in absolute peace, there is the atmosphere of harmony that bespeaks a happier day.

We present a unique front of twelve men, armed cap-a-pie. There are one dozen registered physicians in Oldham county; but I regret to say that five of these to-day stand in the column of non-pay. Therefore, we have had to reach across the confines of our little county to make out our dozen.

There seems to be a ripe field for constructive work in the way of more scientific study and application and better fees. We desire a visit annually, at least, from our councilor and the secretary of the State Board of Health.

We note with satisfaction that the health car of the anti-tuberculosis association visited the county in August. The writer visited the car in Pewee Valley.

Our censors have not been active. They take their honors with easy care and leave the secretary to root.

The following officers have borne their 1915 honors with comeliness: Dr. C. B. Goldsborough, President; Dr. C. L. Hancock, Vice

President; Dr. E. D. Burnett, Secretary-Treasurer; Dr. E. D. Burnett, Delegate 1915; Dr. R. D. Cassidy, Alternate Delegate.

KNOX COUNTY MEDICAL SOCIETY.

C. L. HEATH, Lindsay: Unfortunately for the county society, the secretary of the society was not made a delegate and Dr. Albright, who is a delegate, is not here, and so I have to make a report. At our December meeting we had the election of officers. We have 16 members. In the January term we got two more, and two doctors made application from Bell county for membership. One is not a reputable man, and the other has been practicing six or eight months. He quit and then began to practice again. We believe we have got every eligible man in the society for this year. What we will do next I do not know. We have not had more than ten meetings, and at some of these we did not have papers. We discussed clinical questions. At the last meeting I was absent on account of an epidemic of diphtheria over there. It is the first meeting I have missed. We have been doing better the past year than we did the year before. We have a little strife in our county society, in that the men do not get along as well as they should. All things considered, and further bearing in mind the character of roads and the nature of the country, I think we have done very well. I remember in reporting the minutes of last year that it took us three hours and a half to ride to the place of meeting on account of the roads. Such is the character of the country and the conditions we have to contend with. I do not think we ought to be classed with the larger cities where they have automobiles and street cars to get them out to society meetings. We have mud and plenty of it.

BELL COUNTY MEDICAL SOCIETY.

C. A. MOSS, Williamsburg: I would like to say that Bell county has a good live society. They have as many meetings as they possibly can, and they are striving to make it as good a society as possible.

THE SECRETARY: The two reports made by Dr. Moss and Dr. Heath ought not to pass by without more than a simple statement. They have some of the best medical societies in the State. Bell county and the three adjoining counties have four of the best societies we have, when we take in Laurel and Harlan and other sections of the eleventh district. In 1888 when the medical law was first passed, there were only ten eligible doctors registered in the entire district. Now they have aggressive societies in the district which is enough to fill all of us with special pride.

I would call your attention to the intensive health work being done in Dr. Heath's community in the country. Many of you will remember that Dr. Richmond and Dr. Shirley and a number of other doctors went to Dr. Heath's house and were entertained by him. The people of the community were brought together through the influence of Dr. Heath and have established themselves into a health community. Through their active cooperation they have a county health officer with the services of a trained nurse for that particular community. They also have a carpenter who is especially trained in that kind of work who is building a sanitary privy for every rural home in the community so as to help in the prevention of the spread of preventable diseases. This is one of the most encouraging things I have seen done in any part of the state. At the time Dr. Heath first started this work in his immediate district practically every family, almost every member of every family, was infected with hookworm disease. Almost all of them have been relieved, and while some of them became reinfected, they are working with a determination to get rid of hookworm infection and of typhoid fever. It is the best health section in the State, and I say that without the slightest fear of making anybody else feel badly because they have done it under tremendous odds.

Bell county has a whole-time health officer at a salary of \$2,400 a year, and it is wonderful what Dr. Foley has accomplished in the past year. He has put in water supplies in dozens of homes; he has built sanitary privies in hundreds of places; three of the mining camp companies have put in sanitary toilets at every place in the camp, and the mining companies in Harlan county are putting in sanitary privies in every home. This work has been done so well that the Bureau of Mines of the United States Department of the Interior has now in press a bulletin telling about the remarkable sanitary conditions among the miners in Eastern Kentucky. The work has been done better in proportion to the start than has been done in any other mining section in the whole world. (Applause.) I mention these things to you to call the attention of the delegates to what these men have done at tremendous odds, so that you will know them and know more about them.

THE SECRETARY: I move that when we adjourn to meet immediately after the meeting of the Jefferson County Medical Society to-night, and that the first order of business shall be the report of the Medico-Legal Committee as a special order.

Seconded and carried.

THE PRESIDENT: If there is no new business to be taken up at this time in the way of resolutions, etc., I shall declare the House of Delegates adjourned to meet immediately after the meeting of the Jefferson County Medical Society this evening at the City Hospital.

The House of Delegates thereupon adjourned.

SEPTEMBER 22, 1915—SECOND MEETING.

The House of Delegates met at 8 A. M., and was called to order by the President.

THE SECRETARY: I would suggest that we have reports from the delegates of county medical societies, so that we can get them in the Minutes and publish them in the JOURNAL.

MARION COUNTY MEDICAL SOCIETY.

J. T. BOLDRICK, Lebanon: I have nothing special to report from Marion county. We have had one of the best secretaries of any county in the State. Dr. McChord has been secretary for 25 years, and wanted to resign. He has made every effort to get up good programs, but for some reason or other we have not been able to get a good attendance. We have every physician with one exception, who belongs to the county society.

METCALFE COUNTY MEDICAL SOCIETY.

S. R. YORK, Center: I believe every physician in the county belongs to the county society. We had a meeting at Southwell, with a good attendance. Papers were read, and we had reports of several clinical cases. We are arranging to have a tri-county medical society, comprising Barren, Metcalfe and Grant. We hold our meetings quarterly, and every member is a member in good standing. Our secretary, Dr. VanZant is a good man.

THE SECRETARY: In Metcalfe county there are bad roads at this time of the year. They have a splendid profession there and deserve credit for the good work they have done. They cannot do the same kind of work that is done in Lexington and Louisville, but they have done better lately than in the past.

LINCOLN COUNTY MEDICAL SOCIETY.

J. G. CARPENTER, Stanford: Lincoln County Medical Society is not worth a damn. It has degenerated. Our meetings are very irregular. We have promised to meet next month. We have 28 doctors in the county, and five of them do not belong to the society and never will. The undertaker ought to get them as soon as possible. There are petty jealousies and little bickerings. We have many good things to eat, good roads, and good things to drink, and there is no reason why

we should not have a better county society. I do not know whether we will be able to resurrect it or not. There was a time when we had 100 visiting doctors at a time, and it was common to have 50 or 75 in attendance at the meetings. Now, if we get 6 members we are doing fine. There are 24 doctors who have paid their dues and who are in good standing, except they will not meet. They are lazy and they are not studious.

REPORT OF COUNCILOR FROM THE SEVENTH DISTRICT.

A. W. CLAIN: My first work after being elected Councilor, was to visit and assist in the organization of the McCreary County Medical Society, which had never been organized, and which was added to my district at my request after the meeting of the State Association, there are 10 doctors in this county all of whom belong to the society. Dr. A. Weddle has since left the county and become a member of the Lincoln County Medical Society. This society meets each month and we are doing splendid work. I consider it, while not large, one of the most active societies in the district.

The second society visited was the Russell County Society which met at Russell Springs on May 29, 1915, while we did not have a large attendance, we found the society in good working order well organized and both L. D. Hammonds, President, and J. B. Scholl, Secretary, are doing everything in their power to keep up the interest of the society. There are eleven doctors in this county, ten of whom belong to the society, the one who is not a member, has retired. This society has had several public health meetings in different parts of the county, and the public is very much interested in the work.

The third county visited, was the Casey County Medical Society, which had not met for about a year, and had held no meetings for even a longer time. After writing personal letters to all of the doctors in the county, there were only four doctors present at this meeting. There are fourteen doctors in this county, three of which have paid their dues. For a long time this was the banner county of the district, during the life of Dr. J. T. Wesley all the doctors in the county were members for a number of years, and it is difficult now to assign any reason why there is such a lack of interest, the doctors present at this meeting were enthusiastic and after affecting an organization they promised, and we have no doubt but what they will again do good work. Some of the very best talent in the State is in Casey county. They have since had a meeting with a fair attendance.

My next visit was to the meeting of the

Wayne County Medical Society, which met at Monticello, June 15, 1915. This society usually meets at night, and while all the members do not attend, the society never fails to meet, due to the efficient work of the secretary, Dr. J. P. Young. It is well organized and doing good work. There are ten registered doctors in the county, and seven have paid their dues. The members of this society are active and they are particularly so in the treatment of medical diseases; the different members having probably used more serums and vaccines than have been used in any other county of the district. Dr. A. S. Cook, who is now 70 years old, is still one of the most active practitioners in the county, and is fully alive to all that is new.

Dr. Young entertained the society royally in his office, and it would be difficult for any one to give a good reason for not attending these meetings, and perfect harmony seems to exist among the members present.

My next meeting was the Garrard County Medical Society which met at Lancaster. There are eleven registered physicians in this county, one of whom is a colored man, and all except the latter are members in good standing in the society. This society meets regularly and is doing good work; perfect harmony prevails. A good program was prepared and rendered; the society was entertained at the hotel. There is probably no other society in the State better organized and doing more efficient work. Dr. Kinnaid is the secretary and his efficient work has no doubt a great deal to do with making the society what it is. Several other doctors are doing good surgery and taking care of their patients at home.

My next visit was to Stanford, the Lincoln County Medical Society. They have 29 registered physicians, only 18, however, have paid their dues. This society has not been meeting regularly, but on the date of my visit, which was not their regular meeting day, we had an attendance of 17 members, a larger attendance than at any other meeting in the district; a number of interesting cases were reported and discussed, and some papers read, all of the members appeared enthusiastic as to the future of their society, and with their good roads, there is no reason but what this society should prove a great success.

I have failed to visit the Rockcastle and Clinton County Medical Societies, but am informed by their respective secretaries that they are well organized and doing good work. My own county Pulaski, has 25 registered doctors, with only 11 paid up members. Our society started off rather badly this year by electing a secretary who failed to serve; however the society has only missed one monthly

meeting; a large part of our time is taken up by the report of cases and discussion, which we have found to be very instructive and helpful. A number of papers have been read at the different meetings and have generally been thoroughly discussed. Taking the work altogether, while it is not what it should be, we feel that all the members have been greatly benefitted.

REPORT OF COUNCILOR OF THE SIXTH DISTRICT.

R. C. McCHORD: All of my counties have registered, and there has been a gain of three in my district over former years instead of a decrease. We have got practically every man in the district who is eligible for membership in the society. There are one or two of my counties that have been a little derelict. One county has not had a session for three years. I got the president, Dr. Moren, to visit them and he stirred them up, so that they held a meeting of the society the first week that we were there. They have not had a meeting for three years. All together we are getting along pretty well up there.

THE SECRETARY: Now Dr. Taylor is dead, who is there to take his place as secretary?

R. C. McCHORD: I think we can get some big young man to take charge. Dr. Taylor has been a great worker. He has been very persistent to keep the men in line, but he has managed to do it, and he will be sadly missed there. However, I think we can get a good man to hold up that end of the district.

THE SECRETARY: This meeting ought not to adjourn without something being said about Dr. U. L. Taylor. He was one of the most remarkable men in the profession of the State. He was appointed on the first Board of Health created in Adair county in 1878. He served as health officer from that time until his death. Two days before he died he rode 17 miles to see some cases of diphtheria. For the past ten years he had been a whole-time health officer without a doubt. He did an amount of real work in his county that is almost incalculable. It was one of the counties where the tuberculosis death rate was cut half in two in seven years. He had administered antitoxin personally, that is, a prophylactic dose, to the pupils in every school where diphtheria broke out. When you understand that Adair is one of the most backward counties in the State, you can further understand what a tremendous task he had before him. He was 83 years old when he died. A few days before his death I received a letter from him telling me about the developments in the county society and the interest with which he looked forward to attending this meeting and taking part in its

deliberations. He stated that he intended to consecrate the balance of his life to preventive medicine, and then died in harness within a few hours of pneumonia. In a general way, Dr. Taylor's life was typical of the lives of all doctors. He had given unselfish service to his people. The first thing we need to emphasize here to-day is that the Fiscal Court of his county refused to give him any salary at the beginning, and the Court of Appeals decided that they must give him a reasonable salary so they fixed it at \$25 a month for devoting his time to the position of health officer! He accepted that amount. That was his sole income besides a little property he had. He rendered his service on that income. It was not a square deal to him. He was not treated right here, but those who have any confidence in eternal justice will feel that our departed friend and brother is receiving the reward he merited and it is comforting to us all to know that sort of reward is to come to us if we merit it, because it is about all a great many of us will get under existing circumstances and laws.

HENRY E. TULEY: I move that a committee be appointed, with the Secretary as a member to draft suitable resolutions on the death of Dr. Taylor expressing the feelings of the House of Delegates.

R. C. McCHORD: I knew Dr. Taylor well. He was in my councilor district, and I know that he was a man devoted to the interests he served. He was not a brilliant man: but he was a family doctor, and in the latter part of his years he thought he was not competent to practice medicine, and he devoted his whole time to the health office business, and it only goes to show what a whole time health officer can do. He visited all the schools and other places. He did all the good he could, and the result was that the death rate in Adair County, which had been enormous from typhoid fever and smallpox, was materially reduced. The death rate in Adair County recently in proportion to the population was less than any county in the State. (Applause.) It shows what a humble man can do in that way. He was devoted to his profession, and was a typical family doctor in his prime.

J. S. LOCK: Last year I was associated with Dr. Taylor from four to eight weeks during a health campaign in that county. He was more than eighty years of age then, and I did not make a trip even to the most outlying districts of that county that he was not with me. He was active. I am not saying this in any way that would be a detriment to any other health officer in this State because they have all given me active support, but he gave me the most active support in the health campaign of any other health officer in the

State of Kentucky. (Applause). He was devoted to his work. He was ready in the morning before I was, and he stayed until I came in. He did not leave me. His people thought a great deal of him. His influence was marvelous. I do not believe we have ever had a health officer in Kentucky to equal him considering the conditions under which he labored. If we had more men in Kentucky like Dr. Taylor; if we had one in every county, the death rate from preventable diseases in the State would soon be almost nothing. Those who were not interested in the public health questions in Adair County did not support Dr. Taylor as they should, but nevertheless they give him praise and seem never to get tired of telling about the achievements he accomplished in the way of the great reduction of the death rate. Dr. McChord has referred to that, and I can substantiate what he has said, that the most humble citizen praised Dr. Taylor for the reduction in the death rate in consumption, typhoid and other preventable diseases. I think all of us would do well to emulate Dr. Taylor, and every health officer in Kentucky would do well in taking Dr. Taylor as an example for his work.

W. B. McCLURE: I second the motion.

Carried.

THE PRESIDENT: I will appoint on the Committee to draft suitable resolutions to the memory of Dr. Taylor, Drs. McCormack, McChord, and Lock, and will suggest that these extended remarks that have been made be printed in the proceedings of the House of Delegates. I would further suggest that these resolutions be published in the county paper of his home.

REPORT OF THE WARREN COUNTY MEDICAL SOCIETY.

B. W. WRIGHT, Bowling Green: Officers for the present year have been, President, Finis London; First Vice President, E. Rau; Second Vice President, W. H. Neel; Delegate, B. S. Rutherford; Secretary-Treasurer, Burnett W. Wright.

The attendance has been universally good and the year's work has brought forth a number of papers of unusual interest. The Society has been fortunate in having papers read by Dr. R. W. Billington and Dr. W. A. Bryan both of the faculty of Vanderbilt University. Dr. Billington took for his subject, "The Problem of the Cripple," illustrated with lantern slides and this paper has stimulated an unusual interest in orthopedics in this community. Dr. Bryan's paper on "Pyloric Obstruction" was characteristic of the thoroughness and clearness with which this distinguished author and surgeon deals in all his papers.

With one exception the society has met reg-

ularly on the second Wednesday of each month and the attendance has been good.

PIKE COUNTY MEDICAL SOCIETY.

THE PRESIDENT: We have a delegate from Pike County, Dr. Stallard, who is now the county judge of Pike County, and I am sure we would like to hear from him.

H. H. STALLARD: I am not in the habit of making speeches, but I think Dr. McCormack misrepresented a little bit the size of our county. We are not quite as large as the balance of the State, but I will say that we have the largest county in the State. I am not at present practicing medicine. I have not done so for four years. I was elected four years ago to fill the vacancy in the office of county judge. I hold that position now and will for two years to come unless something comes that is not expected.

I want to say to you, that I am glad I have been to this meeting. It is the first meeting of the State Medical Association that I have ever attended. I have always done the best I could for my people in the practice of medicine, and I practiced medicine for 23 years without taking any vacation until I was elected county judge. Since that time I have been busy, and have not had time to practice. However, I am one of you, and if any of you come to Pikeville, hunt me up, and I will do the very best I can.

REPORT OF MONTGOMERY COUNTY MEDICAL SOCIETY.

J. F. JONES, Mt. Sterling: As Secretary of the Montgomery County Medical Society, I report the following from September, 1914, to September, 1915. We have the same old complaint and it seems to be state-wide from reports in the JOURNAL, lack of interest to attend our meetings. We have seven or eight members that try to come and out of this number we generally have a quorum (five), some of the others come occasionally and the others never come at all and we think it is because they do not want to come. We have missed four meetings in the last year.

Last year (1914) we had nineteen members, this year we have taken in three new members but four of our old ones dropped out for non-payment of dues and that gives us eighteen members for 1915, a loss of one.

Our delegate for the Louisville meeting is J. F. Reynolds and J. F. Lockhart is alternate.

Our present officers are C. B. Duerson, President; D. H. Bush, Vice President; J. F. Jones, Secretary; J. F. Reynolds, Treasurer; Censors, C. B. Duerson, D. H. Bush and P. K. McKenna.

REPORT OF UNION COUNTY MEDICAL SOCIETY.

S. L. HENRY, Morganfield: We have nineteen members, fourteen of whom have paid full dues to the State Association. We had four meetings of our society during this year, about half of our members being present, the balance take no interest in the society at all. We hope to do better next year. We will have to get you to make us a visit, soon. In looking over my reports, I find that I neglected to send in Dr. Snow's dues. They were paid in but being very busy at that time, I neglected to send them in; so will have to ask you to please excuse neglect.

LETCHER COUNTY MEDICAL SOCIETY.

W. L. GAMBILL: Letcher County is not as large as Pike, but still it is on the map, but not on the map medically so far as a society is concerned. I happen to be its executive, and naturally being engaged in contract work I cannot get away very much, and we have not as yet been able to organize a medical society in Letcher county. I went to every medical society before I graduated, but I am so far away in the woods that we do not have a medical society, and I thought it would be recreation to come back to my city in which I graduated and meet the doctors of Kentucky. We up there have not the advantages of some of our fortunate brethren have in the larger cities. However, we feel we are very well equipped for the hills. Thanks to the consolidation company for their liberality in building a hospital of about 60 beds. We are getting along smoothly. While there is no one else here from Letcher county, I wish to assure you in behalf of the profession of that county that we are with you in anything we can hope to do. We have the welfare of the profession at heart, and as for me, I would prefer that my brothers in the profession would speak well of me when I am gone than to have the praise of the laity. (Applause.)

Dr. Moren then presented the Report of the Medico-Legal Committee.

The time for the scientific session having arrived Dr. Moren was unable to finish the presentation of his report.

VIRGIL E. SIMPSON: I move that when we adjourn we adjourn until 5 o'clock this afternoon.

THE PRESIDENT: If necessary, the House of Delegates could hold a meeting while the scientific session is going on so as to give Dr. Moren more time.

THE SECRETARY: I second the motion of Dr. Simpson

Carried.

The House of Delegates thereupon adjourned to meet at the time designated.

SEPTEMBER 23, 1915.—THIRD MEETING.

The House of Delegates met at 8:00 A. M., and was called to order by Vice President C. L. Heath, in the temporary absence of the President.

The Secretary called the roll and announced a quorum present.

At the conclusion of the roll call, President Kincaid arrived and took the Chair.

THE PRESIDENT: As nominations for President are in order, I will appoint as tellers Drs. Dismukes, Tuley and Bird.

Sidney J. Meyers, Louisville, nominated for President Ap. Morgan Vance, of Louisville.

The nomination was seconded by H. D. Rodman, R. C. McChord, and Lewis S. McMurtry.

W. E. Senour nominated W. W. Anderson, of Newport, for President.

The nomination was seconded by J. E. Wells.

A. E. Stevens nominated Dr. P. H. Smart of Paducah, for President.

The nomination was seconded by H. G. Reynolds and J. L. Dismukes.

As there were no further nominations, the House of Delegates proceeded to ballot.

Dr. Vance receiving the largest number of votes cast, the President thereupon declared Dr. Vance duly elected President for the ensuing year.

It was moved that Dr. Vance's election be made unanimous.

Seconded and carried.

THE PRESIDENT: Nominations for First Vice President.

W. B. McClure nominated M. E. Hoge of Breathitt county.

H. L. Biggs seconded the nomination.

J. T. Reddick nominated Frank Boyd, of Paducah for First Vice President.

Nominations being declared closed, a ballot was cast.

Dr. Hoge was declared duly elected First Vice President.

THE PRESIDENT: Nominations for Second Vice President.

Paul F. Keith nominated Amphas W. Davis, of Hopkins county for Second Vice President.

It was moved that nominations be closed and the Secretary be instructed to cast the ballot of the House for Dr. Davis.

Seconded and carried.

The Secretary cast the ballot as instructed and Dr. Davis was declared duly elected.

THE PRESIDENT: Nominations for Third Vice President.

Milton Board nominated J. B. Mason, of London for Third Vice President.

It was moved that nominations be closed and the Secretary instructed to cast the ballot of the House of Delegates for Dr. Mason as Third Vice President.

Seconded and carried.

The Secretary cast the ballot of the House as directed, and Dr. Mason was declared duly elected.

The following officers were nominated, and declared duly elected:

W. W. Richmond and Carl L. Wheeler, of Lexington, were elected Delegates to the American Medical Association.

Charles W. Hibbitt, of Louisville, was elected Councilor of the Fifth District.

W. L. Gambill, of Letcher, was elected Orator in Surgery.

Edwin A. Stevens, of Mayfield, was elected Orator in Medicine.

Hopkinsville was selected as the next place of meeting.

W. W. RICHMOND: In view of the fact that Dr. C. Z. Aud's term on the State Board of Health expires this year, I move that the names of Dr. Aud, D. M. Griffith and R. C. McChord be enrolled and presented to the Governor as the nominees of this Association to fill Dr. Aud's vacancy.

Seconded and carried unanimously.

Mr. D. Goode, Head of the Publicity League, appeared before the House of Delegates and pointed out the advantages of holding the meetings of the Association every two years in Louisville instead of every three years.

THE PRESIDENT: Report of the Committee on Medical Education.

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION.

W. W. RICHMOND: The report of your Committee necessarily consists of a statement of the progress of medical education as exemplified in the Medical Department of the University of Louisville, which is a renowned school of medicine and the only institution of its kind in the Commonwealth. Your committee has annually inspected this school, and has been accorded every opportunity for examining the methods of teaching in the laboratories and hospital.

The 79th annual session of the University of Louisville, Medical Department, will begin with formal exercises on Tuesday, September the 28th.

It is a matter of State pride that this institution is now ranked in class "A" with such institutions as Harvard, Jefferson, Rush, Johns Hopkins, and other high class medical schools of America, and that its graduates

are now acceptable in every state in the Union.

It has taken the profession of the country a long time to recognize the minimum requirements for entrance to the study of medicine, which are 14 Carnegie units of high school work and one year of college pre-medical work, during which physics, chemistry, biology and a modern language, either French or German, must have been studied. The Council on Medical Education have issued a brochure outlining the minimum requirements as accepted by the Council on Medical Education and the Association of American Medical Colleges. It has been found that a large number of young men ambitious to study medicine, are handicapped in their choice of a secondary school and college, in which they may obtain their preliminary education. Work done in a high school is not acceptable unless that school is accredited by the State University of the State in which it is located and the college must be accepted into membership of the College Association. Many prospective medical students are attempting to do work of college grade in State and other normal schools, but it is impossible for this work to be accepted as of college grade. With these facts before us, therefore, we think it important that as much publicity as possible among physicians be given to the minimum requirements for the study of medicine and for the necessity of the high schools and colleges to be of standard and acceptable grade.

The University of Louisville in its College of Arts and Sciences is giving the pre-medical college work most acceptably. A number of young men are taking the combined course, leading to the degree of S. B., M. D., which is awarded after two years residence in the College of Liberal Arts and Sciences and four years in medicine. With the added requirements for admission the numbers in the classes are bound to be smaller but much better work will be done with the individual student. The work done in all branches of the Medical Department is up to the highest standard. Budget for the maintenance of the Department provides for adequate all-time assistants and professors which will enable the best kind of work to be done by student in the primary or laboratory branches. The clinical teaching, especially as to ward classes in the new City Hospital, has been thoroughly organized, and as now conducted afford every student of the advanced classes that *individual instruction* at the bedside which is such a prominent feature of modern medical teaching and so essential to prepare graduating physicians for the practice of their profession.

The work during the session of 1915-16 bids fair to be taken care of enthusiastically by all of the teaching staff. The Commencement of 1915 marked a new era in the university life of Louisville. The Commencement exercises were held at Macauley's Theater, participated in by the Departments of Arts and Sciences, Law and Medicine and the annual address was delivered by President Dabney, of the University of Cincinnati; and the degrees were conferred by President Ford, of the University of Louisville, the candidates for graduation being presented by the Deans of the several Departments.

The Week of Clinics and Special Course on Fractures and Dislocations given by the Faculty of the University, complimentary to the Alumni, was largely attended and this course will be repeated during Alumni Week, preceding graduation exercises in 1916.

The outlook for the medical school of the University is very bright and we bespeak the active support and encouragement of the entire profession of the State.

THE PRESIDENT: Report of the Committee on Preventable Diseases of the Eye.

J. A. STUCKY: Your Committee desires to report that we approve of the action taken by the Republican, the Progressive and the Democratic parties of Kentucky in recommending State aid for the prevention and cure of trachoma in Kentucky. Secondly, we recommend legislation in Kentucky for the annual testing by school teachers of the eyesight and hearing of pupils.

THE PRESIDENT: What will you do with this report?

THE SECRETARY: I move that it be received and approved by rising vote.

Seconded and unanimously carried.

THE PRESIDENT: Report of the Committee on Public Health and Sanitation.

Report of Committee on Public Health was received as follows:

REPORT OF COMMITTEE ON PUBLIC HEALTH.

C. L. HEATH, Lindsay: The question of Public Health and Sanitation has become to be of so much importance to the people of our State, that one can hardly do it justice in as short a time as we have now.

We would like to call especial attention to a few things that should have the united support of the medical profession of Kentucky. One, and the most important of all, is the All-Time Health Officers Bill which will again come before the coming session of the State Legislature. This Bill should not be allowed to be killed as the last one was. We would advise that each member when he gets home begin to make it plain to his Senator and

Representative that we do expect that they support this measure.

There are so many of the common diseases that are preventable when managed properly, but before that can be done there must be a lot of work along the line of teaching the public how to do the things that will prevent the spread of the contagious diseases. And to show the public that we are really in earnest, let each physician here begin a school with his own patients as scholars, and teach them thoroughly that he is really interested in their welfare, and we will have no trouble in getting any legislation that we could reasonably ask for. Some of the diseases that need especial attention from the public at present are the ordinary contagious diseases, which are not properly handled in a great many counties. Then we have trachoma in the eastern part of the State, which calls for more careful and scientific attention than the other ordinary diseases, and it is a pleasure to say the U. S. Public Health Service has sent their trained men to take charge of this disease, and we recommend a formal vote of thanks from this body to the Surgeon General and to Dr. McMullen.

A great deal has been and is being done to eradicate hookworm disease and the evils that accompany it, but Public Health demands that this be everlastingly kept up with no let up, if we get any good from this work.

We need more investigation of pellagra; in some sections of the State it is spreading and causing a great deal of alarm.

This is not a very complete report but will invite the support of the profession of Kentucky to make a general and combined effort to give to our people a chance to have clean and healthy bodies and thus be able to better enjoy the privilege of living in the best and what should be the healthiest State in the Union.

THE SECRETARY: Under the head of this report, I desire to move that the House of Delegates pledge the Association to an active, aggressive and effective campaign through its individual members and through every influence and power that it controls toward the passage of the whole time health officers bill at the next session of the legislature, with such suggestions and amendments as will carry into effect the purposes of the medical profession in regard to the prevention of trachoma and other preventable diseases that come within the duties of the State Board of Health, and that this shall be the program of the medical profession of Kentucky before the next General Assembly.

MILTON BOARD: I second the motion. Carried unanimously.

THE SECRETARY: Under the report of

the Committee on Guests, I would like to nominate Dr. Moore, of Huntington, West Virginia, as a guest of the Association, who is a distinguished specialist in diseases of the eye.

Seconded and carried.

THE PRESIDENT: Report of the Committee on Division of Fees.

MILTON BOARD: Your Reference Committee on Division of Fees begs leave to submit the following report:

We condemn without reservation fee-splitting between the specialist and the general practitioner. This practice is degrading, immoral, and contrary to every possible conception of medical ethics, and will not be tolerated by the Kentucky State Medical Society. As the law gives the State Board of Health the power to revoke the license of any physician guilty of unwarrantable conduct, we recommend that the fee-splitter be made an example of the efficacy of this report.

I move the adoption of this report.

Seconded and carried.

REPORT OF COMMITTEE ON ETHICS.

E. D. BURNETT: We endorse all the forces that make for good fellowship and equal rights among the medical fraternity of Kentucky. The ideals of the Kentucky State Medical Association have kept apace with the "Golden Rule." Notwithstanding this fact we see recorded many malpractice suits that doubtless are born of malice and low aim.

No physician or surgeon in our Commonwealth has reached such an exalted point of efficiency that should give him license to treat lightly the rights and attainments of the men about him. There is no doubt that merit will eventually come into its own. Let us cultivate peace and the square deal, and thereby give every man his full opportunity. Dignity and nobleness are the offspring of altruism, therefore let us seek daily to enshrine these in our hearts. These things will bring joy to the individual and reflect glory upon our organic body.

We recommend that every county society in this association use every legitimate means to enlist every man within its borders. We further recommend that the county society be made the clearing house for adjusting all things pertaining to Ethics.

THE PRESIDENT: Report of the Committee on Finance.

L. C. REDMON: Your Finance Committee begs leave to make the following report:

After carefully considering the reports of the Secretary and Treasurer, we recommend the purchase of another bond in addition to the one we now have. We also recommend that an appropriation be made for any deficit incurred in connection with the work

of the Medico-Legal Committee. We recommend to your concurrence the management of the society's affairs.

It was moved that the report be adopted.

Seconded and carried.

THE PRESIDENT: Report of the Committee on Reports of Officers.

CHARLES A. VANCE: This Committee has read with considerable care the reports of the different officers, and first, we wish to congratulate the State Medical Association on the fact that there was a goodly gain in membership during the past year; and that the Association is in a better way financially than in any previous year.

In the report of the Council, we note that the Medico-Legal Committee has rendered very valuable service to members of the State Association, and we wish to thank them in this report. We recommend that one or two more bonds be bought and added to our surplus; we think that this surplus should be increased as fast as possible and made a real endowment for many things that could be a benefit to the members of the Association; also, that the Editor of *THE JOURNAL* and the proper authorities see if some means can be devised by which the full proceedings of the Jefferson County Society can be published in *THE JOURNAL*. We feel that these proceedings are very valuable to the whole profession in Kentucky, and they should have the benefit of them.

We note, too, that some of the county societies are not sending all of their papers in to be published in *THE JOURNAL*, and we urge that the secretaries of the county societies do their best to get them all in.

(Signed)

CHARLES A. VANCE, Chairman.
W. A. GUTHRIE.

It was moved and seconded that the report be accepted. Carried.

THE SECRETARY: Under the head of "Propaganda for Reform," I would like to move that Dr. Heizer be requested to present this subject to the entire body of the Association instead of this House of Delegates during the morning session.

Seconded and carried.

THE PRESIDENT: Report of the Committee on County Societies.

C. H. LINN: Your Reference Committee on County Societies has the honor to report that 73 counties have shown an increase of membership for the year 1915; 13 counties have reported the same number of members as for 1914. This is a gratifying increase as to membership.

In 1914, thirty-six societies sent reports to the State Secretary of the minutes of their county meetings, and in 1915, fifty-two coun-

ties sent reports. The number of such meetings in 1914 was 82 as against 112 in 1915, showing a material gain in this feature of society work.

In 1914, forty-two counties sent for publication 238 original articles, while in 1915 only three counties sent only 167 original articles for publication, showing a marked falling off in the number of counties sending articles for publication, and a marked decrease in the total number of original articles sent in for publication.

Your Committee simply reports the facts in the last instance and has no comment to make as to the scientific value of the articles in each year.

Your Committee was pleased to hear many good reports from all over the State, many reports showing good and progressive work under exceedingly adverse circumstances and conditions.

Your Committee is compelled to report from the data at hand that it appears the following counties have sent no reports of any kind for publication; in fact, they have done nothing to sustain the life of an active, able and interesting publication of which every member of this society should be proud: Braeken, Clay, Elliott, Estill, Grayson, Jackson, Green, Jessamine, Knott, Larnie, Lawrence, Lee, Leslie, Letcher, Lewis, Livingston, Logan, Marshall, Martin, Menifee, Metcalfe, Monroe, Muhlenberg, Nicholas, Ohio, Perry, Trigg, Triuble, and Washington.

If any county is named which is not guilty, it is an error of the record for which this Committee is not responsible, and due apology is offered in advance. To the last named counties we send greetings, together with the following suggestions offered in the spirit of fraternity and kindness:

Consider your organization and see if your officers are men of character and dignity who command the respect of both the laity and the profession. Especially consider your secretary. If you have not elected the most earnest, hardest working, tactful member of your profession as secretary, you should not perpetuate him in office; but elect the best material you have at the next election of officers.

After putting your house in order as to officers, discuss the question of organization freely and try to get individual help from each member. Let each member try to be more tactful in his effort to bring out the best there is in his fellow members. Avoid the mistake of having papers from a favored few of your members simply because they may be willing and able. Your society may be tired of the same character of papers by the same men. Above all, try to be broad and magnanimous in meeting questions of ethics among your members. Try to give and take

in their adjustment and do not avoid the openly, and dignified discussion of any question of ethics, personally first, and through your society if that becomes necessary.

(Signed)

C. H. LINN,
J. C. GRAHAM,
W. E. FOSTER,

It was moved and seconded that the report be adopted. Carried.

THE PRESIDENT: At this juncture, I will make selections for membership on the permanent committees for the ensuing year:

Committee on Scientific Work is already provided for.

The Medico-Legal Committee consists of J. J. Moren, Chairman; W. B. McClure, and A. T. McCormack, Secretary.

Legislation and Public Policy: C. Z. Aud. D. M. Griffith and Milton Board.

Medical Education: W. W. Richmond, D. M. Griffith and C. A. Calvert.

Expert Testimony: J. N. McCormack, Curran Pope, and J. L. Phythian.

Preventable Diseases of the Eye: J. A. Stucky, R. L. Collins, and J. O. Carson.

THE PRESIDENT: Is there any unfinished business to come before the House?

CYRUS GRAHAM: I wish to make the following motion: In view of the fact that we have had this beautiful structure in which to hold our meeting, and have been treated so royally by the physicians of the City of Louisville, I move that we extend a vote of thanks to the Board of Control of the Christian Church, and likewise a vote of thanks to the medical profession of the City of Louisville and of Jefferson county for the magnificent entertainment they have given us. Furthermore, that we extend our thanks to the *Herald*, the *Courier-Journal*, the *Post* and *Times* for the full reports they have given of our proceedings. Also, that our thanks be extended to the ladies of Louisville.

R. C. McCHORD: I second the motion. Carried.

THE PRESIDENT: Under the head of unfinished business, we will now listen to the Report of the Medico-Legal Committee by Dr. Moren, which was not finished at a previous meeting of the House of Delegates.

Dr. Moren then presented the Report of the Medico-Legal Committee. Upon motion of J. N. McCormack the Secretary was instructed to send a galley proof of Dr. Moren's report to the Secretary of each county society and request that a special meeting be called to consider it in detail.

W. E. SENOUR, Bellevue: I move that Dr. Moren be instructed to furnish the secretary with a typewritten report of his proceedings during the past year, and that a copy of

that report be sent to the secretary of every society throughout the State with the suggestion that a special meeting of that society be called and also of the physicians outside the society in that county to discuss the questions pertaining to this report.

W. B. McCLURE, Lexington: I suggest that in that report we specify, under big head lines if necessary, the absolute limit as to the length of time a man may run over without losing his protection in the society. If we say to these county societies that we will not defend anyone in the society who is sixty or ninety days paying his dues, and instruct the secretary to bring this question up during the meeting, then the doctors can come in or stay out; and Dr. Moren will not be annoyed by doctors coming in after suit is brought wanting protection.

THE SECRETARY: Under the by-laws every member of every county society who fails to pay his dues by the first of April is dropped; as a matter of fact, he is dropped if his dues have not been received in Bowling Green on the first day of April. On the second day of April Miss Howell takes all names who have not paid dues out and there is not a man on the roll of the State Society whose dues have not been received in Bowling Green, and no man is reported in good standing unless his dues have been paid. We keep the date the dues have been received, so a man is in good standing from the day the dues are received. Of course the dues are due on the first day of January in each year.

C. L. HEATH, Lindsay: I have already written everyone that unless they paid their dues immediately, they would not have protection of the medico-legal defense branch, and every member of last year paid their dues at the annual meeting when the regular election of officers was held.

Question called for. Carried.

MILTON BOARD, Louisville: The brilliant president of the American Medical Association, Dr. Redman has a hobby and that hobby is a most excellent one, it occurs to me, in that he wants to establish a national board of medical examiners. The function of this board if it is established will be to hold examinations following which reciprocity can be given from state to state. It is not intended in any way to interfere with the province of the state boards: that is to say, if a man passes the national board, the State of Kentucky would not have to recognize his diploma or his examination, but could do this if so desired. I think you will catch the distinction or the idea I want to convey. In San Francisco the matter went over until next year in order that the different societies might take action. I desire to offer the following:

Resolved, That the House of Delegates of the Kentucky State Medical Association heartily endorses the plan of Dr. Redman for establishing a national board of medical examiners.

In many instances the existence of the national board will be of great benefit—it won't be to men who have been in practice for many years because it is unlikely that any of these could pass, but to men who are soon to graduate and who will be capable of passing the national board, it will enable them to move from state to state and if for reason of sickness in family or ill health of physician, business reasons, or any other reasons, it should be desirable to move, it will afford the opportunity for the high-grade, well-equipped man to move from state to state without the embarrassment it now is. As I say, it is not the scheme of those behind this movement to have the national board supplant any of the features of the state board, but will give the state board the right to recognize the certificate from the national board if it so desires.

Motion seconded and carried.

I. A. SHIRLEY, Winchester: Some weeks ago I was called to a county not far away in which they were to try a chiropractic. So far as I know it was the second trial in the State. The one at Newport went against us and the one at Carlisle went against us. This man earns \$20 or \$30 a day and is violating the law every day. The law says every day is an additional violation. He was arrested for ten or fifteen consecutive days. I regret to say that I had no support. No man sat within that bar beside the prosecuting lawyers but myself. Those who ought to have stood by us staid but a short time and departed. It was tried before a magistrate, the county judge being absent on account of some of his family being treated by this man. This magistrate was a good man and meant well, but did not know what was right. This chiropractic was represented by an Iowa counsel, and in defending his client he was allowed to plead obsolete laws. Our attorney told how out of date they were, but still it made an impression on that jury and it went against us. We are going to have another trial soon. I want this body to appropriate a fund to get a lawyer who is not a local attorney, who will tell the people what it is and not be afraid of local influences. We want to stop this gang. A few more verdicts against us and these men will be in all our towns. I move that appropriation not to exceed \$500 be made available to the Council for employment of counsel. I have in mind a man who I believe will do the work, to prosecute cases violating the medical law, in such cases as may be necessary.

Motion carried.

J. N. McCORMACK: We have never failed to convict a man where we had a lawyer who understood the work. I was in Newport last year, saw this case hang the jury because the excellent prosecuting attorney allowed them to bring out a whole lot of irrelevant matter before the jury. I urged him to put two witnesses on the stand. Put the man on the stand he practiced for and paid, and put the county clerk or anyone on the stand to prove he did not have license. We have but one lawyer in the State who takes these matters up in a way that never fails, and that is Mr. Kohn.

J. S. LOCK: We have had two trials in our County and the judge dismissed both of them. We finally had the man indicted at the circuit court and the judge filed away the indictment. I went to the county attorney the other day and told him that we had one proposition to put up to him. The November election was coming and he might not be re-elected if he did not do his duty as the law plainly requires. I made inquiry the day before I left and we have indictments again. I want to say that every practicing physician in Knox county that was a member of the society went into court, sat at the bar and did everything on earth they could to see that they were put out of business, and if we call on you for help we expect you to come.

A. T. McCORMACK: I move that an appropriation not to exceed \$200 be made available to the Council to be used in case they find it advisable to establish a collection bureau plan under the auspices of the State Society for the profession of the State. This has been undertaken in California and in some of the other western states. It is along the lines of the follow-up-letter to men who have incurred indebtedness to the doctors, and it has worked splendidly; the man who sends in the account paying the actual expense of sending out letters, amounting to about 20 cents for the series in any case, and then paying a fixed per cent on the amount collected to the bureau, so as to enable it to maintain itself. Under such a plan the California State Society last year collected for its members a large amount, this being the fourth year of the adoption of the plan. They employed attorneys in two cases only. It is a plan well worth consideration because everything we can do to make our society more valuable to our membership is the thing we want to do, and if the plan is not practical in the State, we will not spend any money.

Motion carried.

THE SECRETARY: I move that we spread on the minutes the expression of the gratitude of the members of

the House of Delegates to Dr. Kincaid, President, and Dr. Heath, Vice President, for the able, satisfactory and impartial manner in which they have presided; and that we extend special congratulations to Drs. Kincaid and Moren for the excellent character of the scientific program of this meeting. I believe it is one of the finest I have ever heard, and they did an enormous amount of work in getting it up. I wish every member of the State Society could be a member of the committee on scientific work one time, then they would know what the work amounts to. It took something like 1,600 letters to get up the program this year.

Many wonder why doctor so-and-so appears on the program year after year. It is because *you* did not do it, and *you* won't do it. It is hard work to prepare a paper to bring before this society. It is a great honor, and any man who is invited ought to feel like a soldier who is drafted for war and ought to do the job! It is not a square deal to expect our committees to make up an interesting program year after year and *you* not do your share! There were sixty-one doctors who accepted places on this program. Twenty-two of them failed to send their papers in. The program was not printed until the day before the meeting and none of them got their names on this program and never will again unless their papers are sent in. Help Dr. Vance to make the program for Hopkinsville. I think I did this meeting a great favor when, after hearing Dr. Stevens read a paper on the Harrison Law at the Southwestern Kentucky Medical Association, I moved that he be invited to prepare a paper to be read at this meeting.

Call Dr. Vance's attention to anything good you may know of.

Motion carried.

The following accounts were reported favorably to the Council, and, upon motion, were ordered paid:

First Christian Church	\$125.00
Dr. A. T. McCormack, expenses.....	29.32
Mayme Sullivan, expenses	13.61
Ollie Depew, expenses	3.70
Clyde W. Howell, expenses	3.80
Maddox & Pearse,	30.00
Dr. South, expenses	8.60
Geo. G. Fetter Co., carbons.....	2.00
Seelbach Hotel Company	64.14
Jefferson County Medical Society	62.50
Fred W. Keisker & Son, rent of tables ..	7.50
S. W. Bassett Co., buttons and badges ..	282.00
American Medical Association, photos ..	
of presidents	56.75
B. P. Eubank, auditor	25.00
Albert Wilhoyte, janitor	5.00

Dr. J. S. Lock, Councilor	17.27
Dr. W. B. McClure, Treasurer	19.50
Dr. Cyrus Graham, Councilor	25.55
Dr. A. W. Cain, Councilor	34.00
Dr. W. W. Richmond, Councilor	25.15
Dr. I. A. Shirley, Councilor	9.95
Dr. R. C. McChord, Councilor	6.00
Times-Journal Bill as follows:	
600 registration cards	2.00
2500 blank cards	2.50
200 linen letter heads	7.00
3300 2-page programs	6.00
1000 12-page programs	18.00

\$891.84

Upon motion, duly seconded, the Association adjourned *sine die*.

A. T. McCORMACK, Secretary.

Modification of Circulation Inside Skull by Twisting the Head.—Muck calls attention to the change in the circulation of the brain when the head, held straight, is twisted around to the side. This compresses the internal jugular vein on that side while it expands the vein on the other side. His attention was called to it anew recently by the changes observed in the bleeding and secretions of gaping wounds in the skull when the head held vertically was twisted around over the shoulder. He was able to obtain sphygmographic tracings showing the modification in the circulation on both sides, one reduced and one augmented, especially with wounds of the skull with unopened meninges.

Cholera Carriers.—Of thirty-nine gallbladders examined by Schobl for the presence of the cholera vibria, three showed macroscopic lesions. In two instances hydrops cystitis fellea was found; that is, distended gallbladder containing mucous bile of light-amber color and flaky sediment. When stirred, the bile assumed a milky appearance. One gallbladder was rather small; the wall was evidently thickened, and the contents were of a rather dark color. On microscopic examination the epithelium was found desquamated, the blood vessels distended, and the mucous membrane showed a high degree of of round-cell infiltration. Blood corpuscles were found free in the lumen of the gallbladder. The cystic duct showed like changes, but the epithelium was not desquamated altogether. Pure cultures of the cholera vibrio were obtained from all three specimens. The cholera vibrio was found seventeen times in the thirty-nine gallbladders.

NEWS ITEMS AND COMMENTS

A UNIQUE LETTER.

Dr. Leon Solomon of Louisville, has favored us with the following letter which is worthy of publication. Is it not a pity that such men are allowed to practice medicine in Kentucky?

..... aug. 15-15.

Dr. Leon, Solomon:
Louisville;
Kentucky;

My daer Sir:— On one occasion, I was A verry devoted pupil, of yours! while you were holding A settee; of Materia medica. & Practice of Medacine; on the old K. U. staff; I am one of the —; Brothers. From Miss. of classes 1903&4&4&5; Came to the Delta. in 1908. had an attack of Malaria. in Oct. 9 & another in 12. the latter of which was verry severe. and some liver involvement. I had slight Jaundice; I had apparently. complete recovery; since which my health has been verry good indeed about four weeks ago. I had an attack which came on verry sudd* only; I became verry suddenly Drunk. as though I had been drink*ing; however I do not drink: the vertigo was so great; that I had difficulty: getting to my Car to drive home. within an Hour I was intensely sick. & Vomited for nearly an hour. after which. I had Petechial spots. all over the palpebral conjunctiva. and in couple of days. I had A Jaundiced Condition of the eyes. and urine was heavily loaded with bile. I have taken Protoiodide of Mercury 1-4 grain. & three of P Ds Choliliths; three times daily; & have drank Calafornia Veronica water.. on which I have gradually mended; I am fearful; that will have to have the gall bladder drained. PLEASE ADVISE ME. IF IN YOUR OPINION. there is any remedy. which will dissolve gall stones. or remove inspissated bile. without an operation;? I like most Physicians; am verry heartily in favor of Surgery. & do a ggod deal of it myself; But always prefer to have it done to the other fellow; I shal feel greatly indebted to you for any prescription. that you may offer. which has proved good in your hands. Hoping that you are enjoying health and prosperity; and with assurance of my verry highest personal regards;

I am.

Your Friend;

..... (M. D.).

RECIPROCITY WITH NEW HAMPSHIRE.

All applicants for registration by reciprocity must appear in person before the Board

at Concord, N. H., and bring with them a certificate as to moral character, signed and made out in full, also documentary proofs that their preliminary education was up to the standard required by the laws of this State (copy enclosed) and further proofs that they have graduated in medicine from a Class A Medical School (A. M. A. Rating) with proof that they have passed some State Board Examination.

On presentation of the proofs in person before the Board, they will be granted a license to practice on payment of the fee of twenty dollars.

All graduates of medicine prior to the year 1907 must bring proofs of their education, both preliminary and professional, and proof that they hold a State License and each case will be considered on its merits, and if satisfactory to the Board, a license will be granted on payment of fee.

For filing purposes applicants must bring certificates of their graduation or attendance at the various schools or colleges they have graduated from or attended. These certificates must be stamped with the seal of the school or college and signed by the secretary or dean in order to be accepted by the New Hampshire Board.

Applicants must also bring a certificate sealed and signed by the secretary of the state in which they hold a license to practice, that they are registered in that state and in good standing at the present time.

No applicant will be considered as a candidate for a license by reciprocity who has previously taken a New Hampshire Board examination and failed to pass.

Dr. J. H. Taylor of Providence, Ky., was operated on Monday, September 13, 1915, at St. Mary's Hospital, Rochester, Minn., by Dr. W. J. Mayo. Gall-bladder and appendix removed. The doctor is doing nicely.

The following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Cutter Laboratory: Anti-pneumonic Serum, Syringes 10 Cc.; Diphtheria Antitoxin Globulin, Syringes 2,000, 3,000, 4,000, 5,000 and 10,000 units each; Normal Serum (from the horse): Syringes 10 Cc.; Tetanus Antitoxin, Syringes 10 Cc.

Hoffman-LaRoche Chemical Works: Imido. Roche, Ampules Imido Roche.

H. K. Mulford Co.: Mercurialized Serum, Mulford, Mercurialized Serum Nos. 1, 2, 3, 4, 5 and 6.

Schieffelin & Co.: Radio-Rem, Outfit No. 4. Standard Oil Co., of California: Calol Liquid Petrolatum, Heavy.

Morgenstern & Co.: The Council has recognized Morgentsern and Company as selling agent for Dolomol and the Dolomol preparations in New and Nonofficial Remedies. The Council is assured that these preparations will be marketed in accordance with its rules.

White Chemical Company: The Council has recognized the White Chemical Company as selling agent for Apinol. The Council is assured that this preparation will be marketed in accordance with its rules.

SPIRITS OF DEAD AT DOCTOR'S TRIAL.—DR. D. W. MEDCALF TESTIFIES THAT SPIRITS OF DEPARTED PATIENTS COME TO COURT.

After deliberating only fifteen minutes, a jury in circuit court late Friday, September 22, returned a verdict of guilty against Dr. D. W. Medcalf, on a charge of practicing medicine without a license.

There were two indictments against the doctor, charging him with practicing medicine in Henderson county without a license. The jury returned a verdict of guilty to one and not guilty to the other. A fine of \$50.00 was returned in the case of guilty.

The indictment on which the defendant was found guilty, charged the doctor with treating Mrs. L. J. Wilson without a license. The other indictment charged him with treating Miss Mildred Gaines also without license. The doctor denied having given medicine in either case, but the jury, after hearing the evidence, thought differently and returned a verdict accordingly.

SPIRITS AT TRIAL.

Doctor Medcalf, while on the witness stand, testified that he believed it possible to communicate with the spirits of those who were dead. In speaking of one of his patients who had died, he said her spirit was present at that time. The doctor is a spiritualist and believes in curing patients without the use of drugs.

The case attracted considerable interest and the trial was attended by a large number of people who were interested on one side or the other. The defendant was represented by Dorsey & Dorsey, while the Commonwealth was represented by Hon. Sam V. Dixon and County Attorney Marvin D. Eblin.

Dr. Medcalf and his wife came to Henderson a year ago from Illinois. For several months he was located at 431 Second street and last June had a boat built and is now living on the river at the foot of Third street. He, with his wife are making their home on the boat. They have people, who take the treatment, go to the boat where he has everything arranged for same.

The following tribute to our ex-president, Dr. J. G. Carpenter, of Stanford, will be read with interest by all of his friends and well-wishers:

SIC-ITER-AD-ASTRA.

(Such is the way to Immortality—
Literally: "Such is the way to the Stars.")
(To James Given Carpenter, Kentucky's
Mountain Surgeon.)

A Tribute by
WM. LANE, LOWDER, Tipton, Ind.

One who oft-times *by thee* stood in days
agone:
By the *bedside*, at the *sunset*, and the *dawn*!

SALUTATION.

O'er thy silvering head, may softly, ever
swell
The low sweet murmur's of the mountain be:
As sweetly mourn the peaceful Palm and
sacred Shell
On Jordan's hallow'd shore, and classic Gal-
ilee!

WHEN

When the autumn leaves, the sunshine turns
to glistening gold
When silver'd o'er is thy hair, and Time for
thee grows old,
When thro' the dim gray mists of mornings,
long since gone by,
When the evening shadows mark "the part-
ing of the ways" with a Sigh—
When aside, thou hast lain the Toils and
Cares of passing years—At last,
When in mem'ry sweet, the days thou art liv-
ing o'er, long since passed,
When test-tube, Scalpel and Sponge have been
Asepticized and lain aside,
When memories of "student days" and "pro-
fessional hours" in idle Moments glide
When the evening shadows Eastward fall and
you're resting—Life's labor done,
When upon the Occidental slope you silent
stand and view the setting sun,
When musing on thy fellow-workers, who've
long since cross'd the Great Divide,
Physicians who've in the *ars chirurgica*, with
thee, labored side by side—

VALEDICTION.

Remember Surgeon—Oh! remember, that,
many a grateful heart *to-day*,
To *thee* goes out in *love*—a tribute (tho'
tardy) we're *ever* glad to pay.
May the years that God still gives thee, joy-
ous be, till *this life ends*:
Is the *ardent wish* I am sending *thee* from
one of a thousand friends.

IN MEMORIAM

Tribute to Dr. J. S. Leech by Barren County Medical Society.

Dr. Joseph Sherrell Leech, born in Glasgow, Ky., August 3, 1858, died July 10, 1915. He spent his entire life in Glasgow, therefore his life is an open book familiar to every resident of our city and surrounding country. His parents, not being able to bestow upon him wealth, gave to him the best of all that can be given a son, character. In his early life young Leech worked as brakeman on the train from Glasgow to the Junction. After which he entered the medical department of the University of Louisville from which institution he graduated in 1884. After studying extensively in the east he returned to his native town where he practiced his profession until just a few days before his death. And by virtue of his brilliant mind together with industry and his indomitable courage came to be and was one of the most profound physicians as well as one of the most skillful surgeons this section of the country has ever known. As a consultant his services were in great demand and his advice and counsel most frequently sought. He was one of the organizers and the first president of the Barren County Medical Society, a member of the Kentucky State Medical Association, and always stood at the forefront in guarding the interest and promoting the progress of medicine and surgery in this county and throughout the State.

Dr. Leech was a positive character, a man who stood for things—for the right, and into whatever he entered, he entered with a whole heart and soul. And in his profession as well as in every other phase and department of his life, he was a man—a gentleman. He knew no cunning but was ever frank and to the point. He was ever true and loyal to his friends—no indictment of ingratitude ever could have been drawn against him. And for those who differed in opinion with him he was always kind and courteous.

His presence will be missed by his friends, by the profession of which he was for so long such a brilliant star, by his church and by the city. Long may his memory live and we are sure it will by many be cherished. Therefore, be it resolved, that in his death we of the profession of medicine have lost our most substantial and wise counselor, genial and beloved friend, and it is our unanimous wish and prayer that our God deal gently and kindly with his bereaved family, whose great loss we in part can and do appreciate.

R. H. PORTER, M. D.,
C. C. TURNER, M. D.,
A. T. BOTTS, M. D.,
Committee.

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NEXT MEETING STATE ASSOCIATION,
HOPKINSVILLE, 1916

COUNTY SOCIETY REPORTS

Daviess—The Daviess County Medical Society met in the County Court room, Owensboro, on September 16th, 1915, with thirty-eight members present.

President G. L. Barr called the meeting to order at 10:30 A. M.

After the reading of the minutes the censors reported favorably on the application of Dr. J. W. Griffin. He was admitted by a unanimous.

J. G. Hale presented a transfer card from the secretary of the Grayson County Society, and was admitted to membership.

J. T. Dixon reported a case of continued fever in which the characteristic signs of typhoid nor malaria were found. He considered it due to some infection. The case was discussed by several, some of whom had seen similar cases.

Stinson Lambert read a paper on "Interstitial Nephritis, Its Causes and Prevention."

The paper was very interesting and was generally discussed.

W. E. Irvin read a paper on "Roentgenology".

Adjourned for dinner. After noon Dr. Barr was absent and Vice President E. D. Turner called the meeting to order. Dr. Turner asked C. H. Todd to preside; he did so.

Several discussed Dr. Irvin's paper.

The next essayist, J. E. Payne, was not present.

The society then adjourned.

J. J. RODMAN, Secretary.

Carlisle—The Carlisle County Medical Society met September 7th, 1915, at the Fair Grounds near Bardwell, Pres. H. A. Gilliam presiding, with the following members present; H. A. Gilliam, Milburn; J. F. Dunn, R. T. Hoeker, W. Z. Jackson, Arlington; T. A. Pease, Kirbyton; G. W. Payne, W. L. Mosby, H. T. Croch and T. J. Marshall, Bardwell; Dr. Merritt, Fancy Farm, and W. W. Richmond, of Clinton, councilor for this district.

The society was opened with prayer by Dr. Hoeker. The Committee on Arrangements reported and was discharged. The committee to revise the schedule of prices was continued to report at the December meeting.

W. Z. Jackson was the first speaker on the program with the subject "Summer Diarrhea in Children." The doctor had neglected to prepare a paper but made a good common sense talk on the subject outlining causes, symptoms and treatment.

G. W. Payne opened the discussion, **Mosby, Crouch, Dunn, Hoeker, Merritt** and **Richmond** also discussed the paper. **W. Z. Jackson** closed the discussion.

The society then adjourned for dinner, which was one of the enjoyable features of the day. It was served in the shade of the trees next to the

grand stand and consisted of fish, bread, pickle, coffee, and so forth, and all present enjoyed the dinner very much.

The society reconvened immediately after dinner and **Dr. Pease** read a paper on "Rheumatism" which will be published in the Journal. The paper was discussed by **Payne, Dunn, Mosby, Crouch, Marshall, Merritt, Gilliam, Richmond, Hecker** and **Pease** closing. This was one of the best papers that has been read before the society in a long time.

W. L. Mosby read a valuable paper on "Hip Joint Disease," this paper is to be published in the Journal. **Crouch** and **Richmond** discussed the paper, **Mosby** closing.

J. T. Dunn read a fine paper on "Care of the Patient During the Puerperal State," which will be published in the Journal.

H. T. Crouch opened the discussion, **Payne, Hocker, Marshall** and **Jackson** also discussed the paper with **Dunn** closing.

The society adjourned to meet in Bardwell the first Tuesday in December.

Cholera Carriers in Relation to Cholera Control.—It is emphasized by **Munson** that in effectively combating a cholera infection the use of laboratory facilities in the making of bacteriologic diagnosis on a large scale is absolutely essential. The recent outbreak in Manila was spread chiefly by personal contact. Cases were isolated so promptly as to do little harm. Lack of the use of toilet paper, certain habits in the use of the toilet, infected fingers and eating with the hands food taken from a common dish were the channels through which the infection chiefly passed from the carrier to another person. Public water supplies and articles of food could be eliminated as channels of infection and flies played an entirely insignificant part in its spread. One of the most apparent lessons learned relates to the possible period of latent infection in cholera and its bearing on the period of incubation and quarantine heretofore accepted for health work. The five-day period usually accepted for incubation and quarantine ordinarily will suffice for the control of infection in the majority of cases; but such a period does not hold good in a very considerable number of instances, which sheds much light on cholera situations not otherwise readily explainable. For example, one carrier, who died of cholera, might have traveled halfway around the world, scattering his infection broadcast during his eighteen-day period as a carrier, and died of true cholera in a place many thousands of miles from any other source of infection. The prompt eradication of a general cholera infection, therefore, includes the detection and isolation of carriers.

Sunlight in Treatment of Tuberculosis.—**Schaffer** relates that, at the instigation of **Finsen**, at the **Vejlefjord** sanatorium in Denmark sunbaths were introduced into the routine treatment of bone and lung tuberculosis as long ago as 1902. In the course of the years since, 364 patients have been given systematic heliotherapy, taking a total of 6,500 regular sunbaths. The duration is only five or ten minutes at first, gradually increasing to an hour. The other measures left no time for longer than this. The men's bath is from 12 to 1, the women's from 1 to 2 p. m.; a physician always takes the bath with the men and a nurse with the women. The method was never applied to patients with a tendency to hemoptysis or progressing pulmonary lesions. Of the 364 patients, 20 per cent. were in the first stage, 33 per cent in the second and 46 per cent. in the third. No by-effects were noted except that some of the patients felt fatigued after the first baths, and that a few developed erythema to such a degree that the course had to be interrupted. No direct influence on the lung process was ever apparent, but now and then certain symptoms seemed to improve and the patients enjoyed the baths and seemed to feel refreshed after them. In some cases—three typical ones are described—the sunbaths seemed to be the prominent factor in the rapid and pronounced improvement. One young man in particular had had fever for a year, with bilateral pleurisy and swollen mediastinal glands. Under the heliotherapy the fever subsided in a month and the general health notably improved, when no measures before had induced any benefit. Another patient was a young man in the second stage of pulmonary tuberculosis with sequels of pleurisy. The pleuritic dullness disappeared almost completely in three months under the sunbaths, and this cannot be a mere casual coincidence. Recently the sanatorium had had halls equipped for artificial heliotherapy so as to be independent of the Denmark weather.

The Pancreas and Diabetes.—**Visentini's** article was awarded the Warren triennial prize at Boston in 1913. It fills over 100 pages and is accompanied by seven double-page plates, some of them colored. Its motto is da Vinci's, "Knowledge is the daughter of experience," and it is based on analysis of the literature on the subject and extensive personal experiments on twenty-seven dogs at the institute for pathologic anatomy at the University of Pavia. The final outcome confirms anew and apparently conclusively that the islands of Langerhans and these alone among the elements of the pancreas control the metabolism of carbohydrates in the animal organism.

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EDITORIAL

AN ALL-TIME HEALTH OFFICER FOR EACH COUNTY.

The provisions and merits of the bill for a health officer for each county in Kentucky, with his office taken out of politics and out of competition with other doctors, and who is so supported that he can give up the practice of medicine and devote his entire time and the best that is in him to the prevention of sickness, is so well understood, and has been so fully endorsed by the profession that, without further explanation, a final appeal is now made to each county society and individual member to bring every proper influence to bear upon their respective senators and representatives in support of this measure. It will be remembered that a similar bill passed the House two years ago by a large majority, and only failed to pass the Senate, where 29 out of 37 members favored it, because of a deadlock in the closing days of the session. The need for such a law is so great, especially in the smaller cities, towns and country districts, where the sick and death rates are so much heavier from typhoid fever and the other preventable diseases, that the bill, which is essentially that of two years ago, can be easily passed if our friends will at once take up its advocacy in a systematic way.

It should be urged upon legislators that the State, as such, has gone almost to the limit of its authority in guarding the public health. In few other states of the Union are the general laws upon this subject more liberal and complete, and, under the wise constructions of the courts, the full police powers of the commonwealth can be relied upon to support every legitimate effort of the health authorities to protect health and life. It has also made ample appropriations to establish and maintain a Bacteriological Laboratory to give free aid to health officials and physicians in the early recognition of communicable diseases; a Bureau of Chemistry and Sanitary

Engineering for advice and assistance in the investigation and improvement of water supplies, sewerage and other conditions affecting health; a Bureau of Vital Statistics for the practical utilization and permanent registration of births, deaths and morbidity returns; an Annual School for County and City Health Officers for broad training in the duties imposed upon these officials; but, most unfortunately, a large part of this invaluable, yea vital, scientific and statistical information, except in a few counties, cannot be brought into the homes and daily lives of the people, because the carefully selected and personally excellent county boards of health are not provided with a trained, salaried executive to conduct its affairs, as are the courts, schools and other governmental activities.

It is because of this fatal defect in our county health machinery that, in spite of the advanced general legislation and liberal appropriations just mentioned, and the training and devotion to duty of those conducting these larger activities, the returns of the sick and death rates for the five years the vital statistics law has been in operation show as a steady average that 60 per cent. of the sickness and 47 per cent. of the deaths for this period were from diseases which could and ought to have been prevented, and entailed more than twice the loss upon the people each year than all the total taxes they paid into the municipal, county and State treasuries. And legislators and the people should understand it as inevitable, and in the very nature of things, that this high sick and death rate, and consequent economic loss, from tuberculosis, typhoid fever and the other preventable diseases, must go on until we have such a health officer in each county, trained for, and devoted to, this vocation, and out of practice and out of competition with other doctors so that they can and will co-operate with him.. It should not be a political office and the tenure should depend absolutely upon devotion to duty and such an education of the people and such a betterment of sanitary conditions

as will steadily decrease sickness and deaths.

As no one can be a health officer of the kind for which this plea is made unless he is trained for this special calling and absolutely taken out of practice, the salary should be such as are given to judges and other officials where a high order of capacity and unceasing devotion to duty are required. In fact, it would be just as reasonable to expect a circuit judge to support himself by the practice of law while serving on the bench, as to expect a health officer to do his more trying and important daily work and at the same time practice medicine to support his family. It should be easy to see why the vocation of health officers and medical practitioners are not only incompatible, as this bill will provide, but that he would have no time for practice if his exacting official duties were properly performed. In order to make it easier to bring all this about, and in the interest of efficiency and economy, it is suggested that, as soon as the terms of present incumbents expire, efforts be made to combine the county and city health offices, or to arrange in some way that both officers may be held by the same person.

In any event, let us no longer deceive ourselves, or permit the people to be deceived about this vital matter. Sustained, practical health work, in the modern sense, cannot be carried on in any county without at least one trained official to conduct it who can consecrate his life to the task, and if county societies, physicians, and especially family physicians, will take up the subject with their respective senators and representatives at once, before they go on to Frankfort, and urge upon them both the importance and the obvious unselfishness of this measure, it is confidently believed that it will pass with practical unanimity.

ANNUAL MEETINGS.

This issue of the JOURNAL will reach you before the annual meeting of your county society. At the December meeting officers are to be elected for next year. At this meeting a confidential communication from the Council of the State Association will be in the hands of your secretary and it is of the utmost importance that you be present and hear it read, as it effects every member of the Association directly and personally.

The most important matter which will come up at the annual meeting is the election of the secretary. If your secretary is one of the hundred effective ones of the State, be sure to re-elect him. If he is not having regular meetings, with an interesting program for each one of them, and if he is not getting the dues of

all eligible physicians as well as their constant cooperation in his work, try somebody else. When you have elected a secretary, pay your dues for 1916 while you are at the meeting. This will save both him and you trouble later. Your dues should reach the State office on January first. This is of more importance this year than it has ever been before, because the House of Delegates directed that no one should be defended by the Medico-Legal Committee whose dues had not been paid promptly, in accordance with the by-laws. We cannot make this too emphatic, and we trust no member will plead for leniency in view of this notice, which is final.

EVERY MEMBER OF EACH COUNTY MEDICAL SOCIETY IS URGED TO BE PRESENT AT THE DECEMBER MEETING, WHICH IS THE ANNUAL MEETING, FOR THE ELECTION OF OFFICERS AND THE TRANSACTION OF OTHER IMPORTANT BUSINESS.

CONFUSION ABOUT ANTI-TOXINS AND CONTAINERS.

The State Board of Health repeats its request, so often made, that communications in regard to antitoxin and vaccines, and for all kinds of containers, except those for water, be addressed to the Laboratory of Bacteriology, or to Dr. Lillian H. South, who has this work in charge, and that no specimens be sent in to this Laboratory except in its proper containers, and to its address.

Likewise, all requests for water containers should be addressed to the Chemical Laboratory, or to Dr. D. P. Curry, who has charge of this work, and all specimens of water should be sent only in such Laboratory containers and to Dr. Curry.

Much delay and no little criticism has been occasioned from the carelessness of patrons of the laboratories as to these matters, which can be easily avoided in the future by heeding this very reasonable request.

JUST A DAIRY.

Every student of human efficiency, really interested in this most practical subject, should take a few days off for a trip to Dallas and spend at least a day or two of the time in the study of the Tennessee Dairy, owned and organized by the distinguished Mayor of the city of Dallas, and operated by a young man of thirty-three, Mr. Waters, born, reared and trained in the country, near Nashville. It has some four hundred and fifty grade Jersey cows and about forty Holsteins in milking. The bacterial count of its milk has never exceeded ten thousand in the summer and is frequently much less than five hundred. The

cows are the best fed, best looking, best contented we have ever seen. The milk and other milk products are the best managed and best prepared we have seen. The barn is not expensive, and there is no comparison in architectural beauty or in the other housing arrangement to such a place as Elmendorf. Naturally we speak of it with special pride because it is operated entirely by southern born and southern trained men, and we know no other institution in the entire South which better shows the importance of human equation in the successful management of great business enterprises.

THE SOUTHERN MEDICAL.

Those members of the medical profession of Kentucky who failed to attend the recent meeting of the Southern Medical Association in Dallas, Texas, missed one of the greatest opportunities that has yet been presented to the profession. The scientific program was replete with interest, especially to southern physicians. The medical and sanitary problems of the southern states are in a measure peculiar. Each and every one of the serious conditions which daily confront us in our practice was discussed by practical men, who are always the ones best qualified to speak.

The work of the general session, under the presidency of Dr. Oscar Dowling, the great President of the State Board of Health of Louisiana, was as full of interest as would be expected with such a leader. The editor of the JOURNAL had the pleasure and honor of presenting an address on "A National Health Program," which will appear in these columns later.

The section on surgery was splendidly attended and the discussions were as good as we have ever heard. This section honored Dr. John H. Blackburn of Bowling Green, by electing him chairman, and we predict for next year's meeting at Atlanta an even greater success under his chairmanship.

In an extensive experience with medical meetings, we have never before seen one honored by the presence of so many ladies. In entertaining them, as in the entertainment of the members in attendance, Dallas fully lived up to Texas' reputation for hospitality. A standard was set which it will be very difficult for any southern city to exceed. Under the general chairmanship of Dr. Cary, the arrangements were perfected so that the most critical could not find a flaw.

The Southern Medical Association has come to stay. With a membership of over four thousand, and an average attendance for the past three years in the neighborhood of one thousand, it is demonstrating that it has a

sphere of action and that it will fulfill it. The entire membership present voiced its confidence in the *Southern Medical Journal* and its esteem for Dr. Seale Harris, its secretary and organizer. The editor of this JOURNAL represented Kentucky on the Council at this meeting, and feels that he is not divulging a secret when he says that the internal business report indicated that the Association and its *Journal* were in a most prosperous condition, and that Dr. Harris' business acumen and sound judgment, as well as his broad medical statesmanship had been demonstrated by every step in the organization of the Association and the publication of its organ.

The next meeting of the Association will be in Atlanta. We hope Kentucky will have a larger representation there, taking an active part in every section. There was a splendid Kentucky delegation at Dallas but not near so many as there should have been. Our hats are off to the Southern Medical Association.

POST CARD REPORTS ON MALARIA.

For a year or more every physician in Kentucky has been receiving a post card at the end of every quarter asking him to make a report on the number of cases of malaria that have occurred within his practice during the quarter. These cards have been mailed to Dr. R. H. von Ezdorf, the distinguished surgeon of the United States Public Health Service, who is making a survey of the Southern states in regard to this important disease. It is a matter of regret that only from seventeen to eighteen per cent. of the physicians of Kentucky have been replying on these cards. This is written with the hope that our members will take more interest in the matter. If you have treated no cases of malaria, say so on the card and mail it in. It does not cost even a postage stamp. In the quarter ending March 31, 1915, 1,798 cards were received from 115 different counties. Eight hundred and sixty cases of malaria were reported of which 709 were white people and 151 negroes.

"LET THE LABEL TELL."

Bulletins of the Department of Health of the City of New York during the past year have given interesting information of the agitation in patent and proprietary medicine circles over provisions of the revised sanitary code requiring that, after December 31, 1915, no such medicines be sold in that city unless one of the following requirements has been met:

1. That the names of all ingredients in the preparation for which therapeutic value is claimed, and of all other ingredients except

such as are physiologically inactive, shall be filed with the department, but such information is open only to inspection by authorized prosecutors of the municipal, state or federal courts.

2. Or, instead of filing the foregoing information with the Department of Health, manufacturers or proprietors of such medicines may print the name of each ingredient on the name of each package or container in large type.

This exceedingly mild and fair attempt of the health authorities to protect the sick people of its jurisdiction from fraud and imposition as to vital matters of which, in the very nature of things, they are so uninformed as to be badly in need of protection, met the organized and bitter opposition of the nostrum makers and venders at the outset, but, after sober thought, leading manufacturers and wholesome druggists notified the Department that they not only endorsed the provisions of the code and would handle no such preparations unless legally registered, but they also went on record as favoring a federal law regulating the manufacture and sale of patent and proprietary medicines for the same reasons which prompted this provision of the city code.

In this action the New York health people have taken an important forward step, but is it necessary to take such a halfway step with this almost nefarious business which has, by false advertising and other questionable methods of exploitation, made pretentious millionaires in every section of the country at the expense of the sick and credulous poor, who need the guardianship of the law to a degree not true of any other class. Would it not be possible for our excellent Pure Food and Drug Commission to make or secure a provision of its code requiring, without alternative, that the label on the package of every preparation sold as a remedy for human ailments shall give the name and quantity of each ingredient it contains. People certainly have the privilege of treating their own afflictions if they so desire, and in many of them this desire is very strong, but for their own guidance and protection they should know the ingredients of all preparations for which such false and alluring claims are made, and which so often lead them to the use of habit-producing drugs and alcoholics. Let the label tell. Such a policy can hurt no one who does not need to be hurt.

SCIENTIFIC EDITORIALS.

MURDERERS AND THE MEDICO-LEGAL EXPERT.

With the malodorous stench of the medico-legal expert of Thaw fame in our nostrils we write this editorial. Many other editorial writers have commented on the nauseating and humiliating spectacle of a great medical name reduced to the drivelling attitude of partial dementia, pleading a hyponotic influence from the now celebrated (?) prisoner. It is interesting to note that Thaw was supposed by Jerome and his prosecutors to be *sane*, a degenerate man killing a degenerate man over a degenerate woman, whose sole value was the physical beauty of her face and body in the appeal to passion. Remanded to Matteawan as a maniac-depressive he was later, by the same man that thought him sane, declared to be a dangerous Paranoiac and should be kept under lock and key. Here again not cold blooded law and justice, but Nemesis pursuing his victim. Again, the spectacle of a man of ability and power making a personal not altogether legal pursuit of his case. Avenging justice. Perhaps Jerome is right. Thaw, probably, was paranoid, possibly not a paranoiac. That he may retain control of himself is not unlikely. The noted German case of Schreiber, who, securing his freedom, wrote his autobiography and remained oriented to his normal environment until his death, might be cited. It was from the study of the autobiography of this case that Freud came to the conclusion that paranoia was based on homo-sexual conditions. Perhaps the long confinement, the constant control he was compelled to exercise both in Matteawan, outside and on the stand, has finally in its sum total enabled Thaw to orient himself to stern reality, perhaps living with two tight cerebral compartments instead of one, and missing accidents, he may so continue to live. Perhaps he was not paranoiac but paranoid. This would make his task easier. Bearing in mind this long drawn out spectacular battle of a powerful rich man and his family versus the mighty arm of the law and one of the shrewdest prosecutors New York State ever possessed, we are now prepared to cautiously consider a communication of Dr. George Walton's to the last meeting of the American Neurological Association in which he pointed out that very commonly persons accused of murder denied all memory of the actual killing, although they might remember events up to and within a very short period of the act and very shortly afterwards. Dr. Theodore Diller in the *Journal of Nervous and Mental Diseases* says:

"I believe there can be no doubt whatever that this statement is correct, and this view was borne out by testimony of those who discussed Dr. Walton's paper. Certainly this is my own experience. In examination of a considerable number of persons charged with murder, denial of actual killing was made in almost every case.

"The discussion of Dr. Walton's paper chiefly turned on the question as to whether this loss of memory of the actual murder was real or feigned; it was pointed out by two or three of the speakers that we could not be perfectly certain in any given case that the amnesia was real or that it was feigned. However, as for myself, I have been disposed to regard this loss of memory as real and not feigned; and for these reasons: (1) It is unlikely that the memory of the killing would be feigned so very generally by persons who committed murder; (2) The fact that repeated questioning and cross-questioning, threats of all sorts have failed to shake the statement made by murderers as regards this point when generally they seem so communicative about everything else.

"I have offered to myself the following reason for this loss of memory; When the murder is committed it is done at the height of great emotional disturbance; and because of the great intensity of emotion the act, the thoughts which occur at that time are not registered in the memory just as the photographic film upon which an intense light is thrown fails to register a picture and only a blur is produced. To illustrate, I might mention it often happens that persons who are subject to violent attacks of anger retain no memory whatever of words uttered or conduct performed during such a paroxysm.

"In this connection, I wish to make mention of two murder cases which came under my observation, one four years ago and one only last year. These were both cases of what I took to be paranoid dementia praecox; both persons were acquitted of murder by reason of insanity and sent to Dixmont Asylum near Pittsburg where they have remained up to the present time. After reading the abstract of Dr. Walton's paper and the discussion thereon, I went down to Dixmont, two days ago, and by the courtesy of Dr. Hutchinson, the superintendent and Dr. Bassett, the assistant physician, re-examined both of these men. Both of them denied all memory of the actual murder, just as they had when I examined them in jail before the trial. I pointed out to both of them that their cases were settled and no harm could come to them by an admission of memory of the deed and tried in every possible way to ascertain that their loss of memory was shammed. But in both cases

denial of the memory of the killing was complete and made in precisely the same terms as before the trial; and their manner showed no real concern for the act which they had committed and each retained the same delusions he had entertained before the murder.

"So here are two cases in which events point very strongly to the conclusion that the loss of memory for the murder was real."

While in many cases this is true, still as medical men we are called upon to exercise the greatest care in allowing such an amnesia to govern us. The question involved is not whether the murderer remembers his act at the supreme moment, but as to whether he is insane, and the question of whether a man is sane or insane is a matter for diagnosis, not by a family physician or general practitioner whose knowledge frequently is only once removed from that of an intelligent layman, but an expert of years of experience, and it may be added, he will often be severely taxed. Nor is one brief interview enough. I have seen ignorant practitioners whose knowledge of psychiatry and psychology was *minus zero*, pass cheerfully and absolutely upon the sanity and insanity of a murderer, when an expert trembled for his humble opinion. Experts must dodge the hypothetical question, demand opportunity for frequent examinations, have placed at their disposal all the history; family, personal, physical, psychic, etc., and for such expert service, and for the extended time involved, be paid by direction of the court from public funds. The time is coming when such methods will be in vogue, when an expert psychiatrist can with self respect, lay before the trial court and the people of his community a report that bears upon it the stamp of *truth* and scientific accuracy. While all experienced men will agree with Drs. Walton and Diller, still we must be extremely careful, cautious and scientific, and weigh all facts after they have been given a thorough "setling down."

CURRAN POPE.

Phagocytosis of Red Corpuscles in Spleen and Liver.—Kyes says that he noticed in the course of experimental research that certain fixed-tissue cells in the spleen and liver were constantly incorporating red blood corpuscles as a physiologic process. He gives the technic for the differential histologic method with which he apparently demonstrated this hemophagic action in the spleen and liver of the reptiles, amphibia and mammals examined under normal conditions. His attention was first called to it in the course of other research on healthy pigeons. A colored plate shows the various steps of the process.

PRINCIPLES IN THE MODERN TREATMENT OF SYPHILIS.

While infection with syphilis does not involve as much suffering as some of the commonest skin diseases, the layman as well as the physician gets panicky and suffers mental agony when he finds himself a victim of this disease. "Can I ever be cured?" was the pathetic appeal before the introduction of "606". With the manufacture of the latter on a commercial scale great enthusiasm and new hope entered the spirits of the victims of this dreaded disease. One or two hypodermic "shots" of this wonderful remedy were expected to entirely destroy the disease. An example of the spirit in which early announcements of brilliant results were received is an illustrated postal card from Germany which contained the picture of a young man and a young lady and below the following dialogue: "Will you marry me?" "Yes, if you have had an injection of '606'."

Enthusiasm gradually gave way to rationalism and the profession and the laity began to question the real efficiency of this remedy. While the real status of salvarsan treatment is as yet in doubt, there is, as Sutton fitly expressed, a host of untrained enthusiasts who fondly imagine that the possession of a "Salvarsan outfit" is all that is necessary to change them into full-fledged syphilo-therapeutists.

While syphilis of to-day is not so difficult to combat as was the same disease thirty years ago when a great many cases were of a malignant type, yet the disease is still serious enough not to be tampered with; skilful and careful treatment is required, and the ability to administer a successful and scientific treatment acquired only by hard work and careful observation. We really cannot see how untrained physicians, druggists and laymen (the last two in particular) can conscientiously treat a disease whose sequelae are not only liable to be disastrous to the unfortunate victims, but to their wives, their children and their children's children for generations after them.

While we have no absolute criterion as to the cure of syphilis, yet with the modern diagnostic methods and modern rational treatment we are nearer to a solution of the cure-problem than we ever were before. Even before the discovery of our modern methods for diagnosis and treatment, syphilis in the hands of trained and experienced men was being cured every day. Gottheil was right when he once said, "Some of us have been at the game long enough to have seen our syphilitic patients marry and have healthy wives and flourishing families and spend years without

a reminder of their old infection." Then, if we were able to treat syphilis successfully before the discovery of the valuable modern diagnostic methods and therapeutic agents, how much more potent must we be since their introduction.

We will not go into the description of the minute details of the aetiology, pathology, and histology of syphilis, but we simply mention a few facts in the new epoch that has been made in regard to the subject of syphilis: particularly since its study has been transferred from the narrow and uncertain domain of clinical medicine to the laboratory of experimental medicine. Schaudin and Hoffman, the first ones to discover the real organism, confirmed the supposition of clinicians in regard to the bacterial origin of syphilis. Successful animal inoculation, first carried out by Metchnikov and Roux, with spirochetæ exploded the theory that animals are immune to syphilis. Wassermann adapted the Bordet and Gengou complement fixation reaction so that it might be used in the diagnosis of syphilis. Schereschewsky then succeeded in growing the spirochetæ outside of the body, though not in pure culture. This was done by Noguchi who has used a similar method in obtaining pure cultures of other bacteria.

In the last few years the conception of immunity, heredity, latency and modes of transmission of syphilis have been greatly changed. The once accepted laws and teachings of Profeta and Colles-Baumes have been almost dropped from our teachings. After many experiments and scientific investigations, far more logical conclusions in regard to immunity have been brought forward by Neisser, Finger, Landsteiner, Levaditi, Uhlenhuth and Mulzer.

The same may be said of heredity of syphilis. The old conceptions of heredity were found to be erroneous, though new ones are far from being clear; serological researches, such as Wasserman's, Noguchi's and others, have opened a wider field in the study of syphilis and have come to our aid in clearing up the diagnosis of old and latent cases which heretofore have been treated for other diseases. There are too many different theories which have been brought forward in recent years, and it would take too long to discuss them all, especially those of chemotherapy, tissue-affinity and permeability, so we will leave them and call attention to a few rules as to the principles and methods of treatment followed by us for the last 15 years, though somewhat modified in the last 5 years. Prior to that we had no method, no rules, and we treated syphilis symptomatically only. We have made grave mistakes, but since then we

have learned a great deal by our mistakes and we strictly adhere to the following rules as elaborated by Neisser: 1st, early beginning of treatment; 2nd, frequent courses of treatment of different intensity suitable to each case; 3rd, general observation and treatment for not less than one year; 4th, topical treatment of the skin and of the mucous membrane; 5th, education of patient in regard to the importance of this disease.

As to the immediate treatment of syphilis, its opponents claim that general treatment should not be instituted until the positive diagnosis is made for fear of a wrong diagnosis. But diagnosis at present is greatly facilitated since we can demonstrate the spirochetæ in the lesions and obtain a positive Wassermann reaction in the blood. We can make a positive diagnosis during the first few days or weeks after infection, and do not have to wait six to eight weeks or even longer for secondary manifestations. It has been fully demonstrated that in syphilis there is a general infection before eruptive manifestations appear, and that during the first few weeks the spirochetæ are invading nearly every tissue and are causing inflammation, infiltration and ulceration. Why wait for this general infection to become established? Would we wait for a suspected case of tetanus to develop lock-jaw before instituting treatment? After the spirochetæ have invaded the tissues unmolested and entrenched themselves, it will be all the harder to eradicate them before they have done considerable damage. Moreover, all persons infected with this disease, and especially those who are married or engaged or contemplating matrimony, want to be ridded of it as soon as possible. As the secondaries may not show up for several months or even not at all, a great deal of time may be wasted in waiting for them.

Prolonged treatment of varying intensity is advisable since it is possible for the spirochetæ to remain latent in nodules and scar-tissue for a long time even when the case has received considerable treatment, while in cases improperly and insufficiently treated the spirochetæ become less susceptible to mercury and arsenic and may resist our utmost efforts to eradicate them. Treatment should be kept up for at least a year, after which period the case should be watched and further treatment determined by the Wassermann reaction and clinical course. Fournier advocates a seven year course of treatment, but with our modern aids in diagnosis, our new and old remedies, we can eradicate the disease in much less time. When both the blood and spinal-fluid give a negative Wassermann reaction and there has been a complete absence of clinical symptoms, we may be suf-

ficiently sure that the disease is eradicated to cease treatment entirely. But as long as any clinical symptoms persist or a positive Wassermann can be obtained after a provocative dose of mercury or salvarsan, the patient should be warned that he may still harbor spirochetæ in his body, and the same care on his part should be observed as earlier in the disease. No good results can be expected unless the patient can be educated as to the importance of following out all the rules laid down for him by the physician.

In regard to the actual treatment of syphilis, we still believe that mercury is our chief dependence, though the methods and forms in which it is used have changed. During the past few years there has been greater progress made in pharmacology than in the previous score of years. Our drugs have been investigated and valuable facts as to their real action have been brought to the light. Just as many of our old theories as to the cause and transmissibility of syphilis have fallen by the wayside, so too it has been with many of our old favorite drugs on which we were wont to rely. In the meantime, the selective action of drugs, their affinities for certain tissues and their inability to enter other tissues and their varying action on the parasites as opposed to their action on the organism, these lines and others have been studied in the laboratory and many of the problems already solved. In no other disease more than in syphilis has this new knowledge been of value. To it we owe such new methods of treatment as the Swift and Ellis salvarsanized serum for intraspinal injection, with the various modifications thereof, such as mercurialized serum, heterogenous serum, autogenous serum, etc. Then chemotherapy has given us a whole host of new organic compounds of arsenic, and even a few of mercury.

In the midst of all these attempts to improve the results of treating syphilis and to make it simpler and easier for the practitioner, what is the actual status of the treatment of syphilis as it is carried on to-day? Do the great majority of physicians get results, or are the patients treated to-day to return in ten, fifteen or twenty years as tabetics and paretics just as we are receiving and treating the insufficiently treated patients of the previous generation? Will we eradicate the disease from a greater percentage of cases than did our predecessors or ourselves thirty to twenty years ago? Surely, that depends on the treatment used by the great majority of physicians and not on the treatment of a few of us. Then what treatment is used by the average physician to-day? We have been making inquiries among practitioners in various cities and also from the country dis-

tricts and it seems clear that the majority are still depending mainly on treatment by the mouth, using the protoiodide of mercury, an aqueous solution of the bichloride of mercury with an excess of the iodide of potash, or even iodide of potash alone. How any one can expect to cure syphilis in the third stage or any other stage by means of potassium iodide alone is more than we can understand, but nevertheless that is the treatment on which many seem to rely. Some combine the mercurial or iodide or mixed treatment with one or two intravenous injections of salvarsan or several intramuscular injections of neosalvarsan, while others use the cacodylate, arseniates or other organic arsenicals. Quite a number depend on one or other of these arsenicals without the administration of mercury in any form. Mercury by the mouth is about as uncertain and inefficient a way of giving it as can be devised; most of the mercury is thrown out with the feces unabsorbed, and one can never tell how much is actually entering the tissues where alone it is of value. Moreover, this method of administration deranges the intestinal tract and produces salivation much sooner than any other method. The injection of mercury compounds, either in solution in water or in suspension in oils, is undoubtedly of value, as will testify those who have used this treatment and seen as rapid a disappearance of skin-lesions as follows salvarsan itself, but many patients object to the injection being given as often as would be necessary were this method alone used. Fumigation is undoubtedly of value but has many drawbacks. A very old fashioned method of administering mercury is by inunction, and it is to their inunctions that certain well-known mineral springs owe their reputation in syphilis. Not the water but the daily rubs with blue ointment cleared up the symptoms. It has drawbacks, of course. It takes longer to give a good mercury rub than to write a prescription for one-eighth grain protoiodide of mercury; some patients complain that it keeps their underwear dirty all the time, while others are unable to come for the inunctions frequently; and the dosage is uncertain. However the fact is established that mercury can be gotten into the tissues by inunction through the skin; that it goes in in large quantities; seldom salivates; does not upset the stomach; does give results; and with ordinary care will not cause any irritation of the skin. If the skin is previously well-warmed by helio-therapy it takes only a short time to rub through a suitable amount of mercury in ointment form. The skin should not be heated beyond the point of getting the pores open, since a greater heat will cause profuse sweating, which interferes with

the passage of mercury into the skin. It is our practice to add a suitable amount of eucerine or goose-grease to the official blue ointment since it facilitates absorption. After the inunction the excess of ointment is rubbed off with a dry towel; this prevents soiling of the clothing to any considerable extent. A different area is chosen each time in the following order: front of thighs; front of chest; back of thighs and buttocks; upper back; lower abdomen and glands; both arms; lower back; then begin again with the front of thighs. In this way if the patient is receiving the rubs on alternate days the same area will be used only once in two weeks, so that there should be no irritation from the ointment. Moreover the movement in rubbing should never be against the hair, since rubbing the hair the wrong way is apt to irritate the skin. It should be remembered that where the mercury comes in contact with the hair there will be formed a black deposit which cannot be rubbed in. From two to four good rubs and injections a week will give more results than can be obtained from over-large doses by the mouth. The skin, however, must be watched very carefully. Mercury applied by Morton's cataphoric electrode is a clean and splendid method and may be substituted for some of the injections or inunctions.

Now comes the arsenical question, what to use and when. That arsenic is a parasiticide is not to be doubted; nor that in the inorganic form it is too dangerous to be used in efficient doses. Sufficient time has passed since the introduction of the salvarsan to give us a fair idea of their value. Most authorities agree that neosalvarsan is inferior to the original salvarsan in its spirochetidal action. Salvarsan seems to be reaching its true level; a valuable remedy but not the "sterilisans magna" that it was expected to be. It has proven to be effective enough to deserve use, yet not effective enough to be relied upon alone. In many of the larger hospitals and in the private practice of our best syphilologists it is now routine to give an intravenous salvarsan, then a course of several weeks or months of mercurial injections and inunctions, followed by another salvarsan and another course of mercury. This is our usual routine and we think it fully justified by our results with it. Many authorities are mixing the injections of mercury with injections of various organic arsenicals. Sodium cacodylate seems to be returning to favor again, and is being used largely, some prefer the newest European synthetics, the newer the better. Certainly when there is an effective way of treating syphilis by means of intravenous injections, intramuscular injections and inunctions it is worse than futile to give a few in-

efficient tablets by the mouth. With a disease so terrible as syphilis in its effect not only on the patient himself, but on generations to come, on society as a whole, on civilization present and future, there should be no parley. It should be treated with the best we have, even if it is more trouble. Anything less is criminal.

M. L. RAVITCH,
S. A. STEINBERG.

WHAT IS THE BEST METHOD OF ADMINISTRATION FOR ETHER?

Ether remains, and no doubt will remain for a long time our best agent for all-around general use. It is satisfactory in its action, comparatively safe, and may be used in the vast majority of cases. It comes more nearly to being the ideal "routine" anesthetic than any other. It is the safest agent in the hands of the novice, who, while probably not giving a particularly smooth anesthesia, will also not likely do harm. We find it still used in nearly all the large clinics and hospitals in the country where a tremendous volume of work is done, and used almost as a routine; we observe only that a variety of methods are advocated; and that they have principally to do with the questions of rebreathing, and of warming the vapor.

The most popular method, and the simplest is of course the "open drop method," using a Schimmel-bush mask, or one of its modifications, covered with gauze or stockinette. On this the ether is steadily dropped, very slowly for induction, and later, for continuance, as rapidly as may be found necessary to maintain in the particular case in hand an even, smooth narcosis. As simple as this procedure looks to the by-stander, it is an art that comes only by long practice. The secret of the smooth, evenly maintained anesthesia depends upon the continuous, evenly maintained exhibition of the ether upon the mask; the avoidance of intermittent dosage, i.e., saturating the mask to overflowing with a heavy stream of ether, and then permitting it to evaporate dry before replenishing. Such a procedure gives a narcosis corresponding in character to the administration; intermittent, alternating deep and shallow.

Such is the "open drop method," with which all are familiar. Eminently safe and satisfactory, and requiring, as has been said much more skill in its administration than would appear to the casual observer. The drop method is often preceded by nitrous-oxide, merely for induction.

The investigations of Prof. Yandell Henderson and others have brought out the part played by carbon dioxide deficiency in the

production of shock, and there is noted now a tendency to modify the open method to a "semi-open," or entirely closed method, using rebreathing to a greater or lesser extent, with the idea of conserving the carbon dioxide content, as a stimulant to the respiration and also as a measure for the prevention of shock. Many anesthetists, including Bennett and Gwathway have long preferred such an administration to one entirely open. That less ether is used, because of the vapor's greater concentration and the rebreathing, is obvious, but on the other hand the same amount of ether vapor is absorbed by either method to produce and maintain the same degree of narcosis and we believe that the air-tight method with its continuous rebreathing and reabsorption of ether that has been eliminated, produces a greater lung congestion, and a better soil for a following pneumonia than does the more open exhibition. And tho the margin of safety with ether is great, the danger of an overdose by the closed is greater than by the open method.

The question of warming the ether vapor is one about which there is considerable controversy. Among the authorities advocating and using warmed vapor are Gwathway, of New York, and Griffith Davis, of Baltimore. The former has proven to his own satisfaction, first that the vapor can be warmed, and so conducted to the patient. He found also that it required from two to three times as long to kill an animal with warm ether vapor than with cold. On the other hand many are of the opinion that warming the vapor has only theoretical advantages, and object to its use in practice on the ground that it complicates the technic, and necessitates the use of apparatus more or less complex. B. F. Davis, and McCarthy believe that the ether vapor reaches the alveoli at body temperature. In other words if it passes through the upper air passages at a temperature lower than that of the blood it is brought up to that temperature by the time it reaches the air-cells for absorption, and if warmer than the body when inhaled its temperature comes down. They believe the warming of ether vapor has no practical advantages of efficiency or safety.

The only really efficient method of warming the vapor of ether is the one by which, after it is vaporized in any one of the many devices for the purpose,—bottles, jars, etc.,—it is passed through many feet of coil, which tubing is immersed in hot water, kept hot by an alcohol lamp, and conducted to the mask through rubber tubing. It is essential of course that all connections be close-fitting and non-leaking, and that the warmer be as close to the mask as is convenient.

W. H. LONG.

ORIGINAL ARTICLES

A PLEA FOR A MORE THOROUGH EXAMINATION OF CASES PRESENTING SYMPTOMS REFERABLE TO PULMONARY TUBERCULOSIS.*

By O. O. MILLER, Louisville.

To-day it is fully recognized that the successful treatment of pulmonary tuberculosis depends in the main upon its early diagnosis.

There are no available figures for estimating the percentage of cases of phthisis that are diagnosed as such in their incipency. Only 22 per cent of the cases that apply for sanatorium treatment at Hazelwood are incipient; the balance is divided between moderately advanced (47.5 per cent) and far advanced (30.5 per cent).

22 per cent.	Incip. 36 cases
47.5 per cent.	Med. Adv. 78 cases
30.5 per cent.	Far. Adv. 50 cases

For 1911 and 1914. Total 164 cases.

In no other disease does the question of prognosis bear such a close and direct relationship to the stage of the morbid process; as in the case of phthisis. With this in mind the importance of a thorough and painstaking examination becomes patent to all. From the history of a large number of patients I am convinced that phthisis is not infrequently overlooked in its incipency and in going back over the trail one can readily see where the way to an early diagnosis was missed. It seems as if the family physician is reluctant to commit himself, to even a provisional diagnosis of phthisis in a doubtful case; the tendency is to wait, wait until the disease has gained such headway that there can no longer be any doubt. One of the great obstacles to an early diagnosis of pulmonary tuberculosis is the insidiousness of the onset and the indifference and ignorance with which the laity view the earliest symptoms. It is not unusual for the family to resort to tonics on the first appearance of lassitude, malaise and loss of weight; or cough syrups where the onset is catarrhal.

It is not until these methods fail or the health of the individual has become seriously impaired that the services of a physician is sought and it is for this critical and psychological moment that I make this plea. This is the most important period in the medical history of any case: the patient has awakened to a realization that something is wrong, he has

the right mental attitude and it is now that the patient may be done inestimable good or irreparable harm. Any quibble at this time about having lungs as sound as a bell or a silver dollar is more likely to be wrong than right. True, the patient will feel better mentally, his fears will be banished, and he will continue ignorantly, if not blissfully, on his destructive way until the more cardinal symptoms of the disease obtrude themselves.

I do not consider that physical findings can be depended upon for the very early diagnosis of pulmonary tuberculosis. And I do not think that they should be waited for in a case with frank symptoms of the disease. At the same time to make a paradox; physical findings can usually be elicited by skilled percussion or auscultation at the time the patient presents himself for examination as the disease has usually progressed sufficiently to give them. Invariably in taking the history of these patients you will find some symptoms prior to the time that the patient considers his breakdown.

Pottenger truly remarks, "The first and most important point in the diagnosis of phthisis is to know when to suspect it"; without such suspicion the physician is inadequately equipped and for him the disease is in its early stages will remain undiagnosed.

The following are the indications which should lead us to the examination of the chest for evidence of pulmonary tuberculosis:

1. A family history of tuberculosis in individuals complaining of ill health.
2. A history of haemoptysis.
3. A history of pleurisy or fistula in ano.
4. Evidence of past or present tuberculosis of lymphatic glands or other structures.
5. Cough with or without expectoration.
6. Hoarseness or loss of voice.
7. Slight lividity or breathlessness on exertion.
8. Loss of flesh or strength without obvious cause.
9. Persistent pyrexia, rapid pulse, low blood pressure, or complaint of night sweating, or repeated chills.
10. Anaemia or dyspeptic symptoms in a young adult.
11. A recent acute illness with protracted convalescence, especially from the infective fevers of the young.
12. Continued general weakness following child birth.
13. History of recent exposure to infection.
14. History of malaise, languor, anorexia, or what the patient may call "being run down."

In a patient presenting any of the above symptoms not only should the chest be exam-

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

ined but a careful family and personal history should be obtained. The patient's immediate and remote family history should be investigated thoroughly. It is not sufficient to state the cause of death but rather inquire how long the relative was ill before his demise; in this way evidence will be deduced that will very often be contradictory to the cause of death as given by the patient. For instance, in obtaining the history of a patient recently the following facts were brought out: He had one brother dead from measles. On further inquiry this same brother developed a cough after his attack of measles which persisted until his death two years later. He also had two sisters who died from measles. One, age 25, was sick two weeks and then died. The other had measles, which, according to the patient, "went to her lungs," and she died three months later. This patient's remote family history is not good either. His maternal grandfather died of tuberculosis. The patient's mother attended her father during his illness.

Sixteen years ago this same woman was confined to her bed several months following a child birth. She now complains of taking cold easily. His father has had a cough for the past two years and takes cold easily. The patient has a maternal uncle who is alive and well but has stomach trouble and this same uncle has three children dead from tuberculosis. It is quite probable that this patient's mother is a chronic case of pulmonary tuberculosis, who was infected by her father and who in turn has infected every one of her children.

A family history of tuberculosis is of importance in determining whether a given individual has or has not inherited a normal resistance to the disease, but a history of prolonged contact with a case of tuberculosis must invariably take precedence over any hereditary taint in searching for a causative factor. Given such a history of prolonged contact with an open case of tuberculosis, in an individual complaining of impaired health in whom even the physical findings may be negative; one ought not to hesitate to make a tentative diagnosis of pulmonary tuberculosis. In fact no more difficult problem presents itself to the examining physician than such cases as these and not infrequently he is asked to state in unequivocal terms whether a young adult who has a slight cough, is anaemic, has lost weight and complains of lassitude is or is not suffering from pulmonary tuberculosis. Very often the physical findings in such cases are vague, indefinite and so questionable that one would hesitate to base a diagnosis on them. But if one will remember that pulmonary tuberculosis is a very common disease in young adults of which wasting, loss of

strength, and anaemia are prominent symptoms, the chances in favor of tuberculosis are many to one. If in doubt a provisional diagnosis of pulmonary tuberculosis should be made. This may be confirmed subsequently by any of the approved tests. To further demonstrate this point it is necessary to introduce the following history: Male, age 35, no family history of tuberculosis and no history of exposure to infection. Present illness began May, 1914, with languor, fever and night sweats. There was no cough or expectoration, no hoarseness or chills, no haemoptysis, but later developed pleurisy, was short of breath; lost weight; appetite became poor; patient consulted a physician at this time (June, 1914) who put him upon antimalarial treatment. Patient was under treatment one month without improvement. He went to mineral springs for two weeks without improvement. The patient then came to Louisville; was examined and told he had no pulmonary tuberculosis but physician sent him north where he began to improve and gained 13 pounds in thirty days, the fever subsided and patient returned to work and worked five weeks. At the end of this time he found himself going down rapidly. His local physician examined him and told him there was no pulmonary tuberculosis. The patient came to the city in November and was examined physically and by X-ray and was found to have pulmonary tuberculosis.

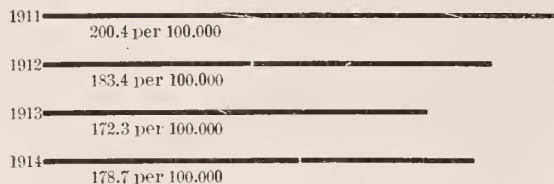
Here is a case in which all the symptoms point to tuberculosis irrespective of physical findings and yet seven long precious months elapsed before a diagnosis was made and the patient, informed of his true condition. Note how readily this patient responded to one month's rest and change of environment in his incipency; and now after eight month's treatment in the "South" he is still a moderately advanced case with both lungs showing medium and fine post-tussal rales in upper lobes, back and front. If these eight months had been applied to taking treatment during his incipency he would in all probability be an apparent cure to-day with his full earning capacity restored.

No examination can be called thorough if one fails to have examined any available sputum. Many cases that deny expectoration will be found, on closer inquiry, to raise once of a morning on arising. While "the findings of the tubercle bacilli in the sputum constitutes the only infallible evidence of the presence of pulmonary tuberculosis, it at the same time indicates that the tuberculous nodule is breaking down and throwing off its cellular elements and that a channel of communication exists between the air passage and the softening focus." In those cases in which the

onset is insidious, it is fallacious and may be too late to wait for the tissues to break down in order to find the tubercle bacilli to make a diagnosis. Such a case could hardly be considered early. In those cases in which the onset is catarrhal and more or less acute the bacilli may appear in the sputum early in the disease. Unfortunately it is not infrequent for both physician and patient to calmly wait for a positive report on a specimen of sputum, before the toscan is sounded and vigorous efforts are made to combat this protean disease. It is not sufficient to report on sputum as negative for tubercle bacilli; in addition to this there ought to be a careful examination of the cellular elements present and a chemical examination for albumin. Practically all cases of active pulmonary tuberculosis contain albumin and a preponderance of mononuclear or alveolar cells; the finding of alveolar cells is concrete evidence of alveolitis; and these cells seem to bear some relation to the amount of albumin present. While the finding of albumin and alveolar cells in sputum is not confined to phthisis, I consider the findings of both in a specimen of diagnostic value, in a case presenting symptoms of the disease.

The public demand for the suppression of phthisis is growing from year to year; and private and public effort is being made to stamp out this disease, which has been entrenched in our midst since civilization began.

The efforts that have been put forth in Kentucky, apparently have not fructified as yet, judging by the death rate for the past four years. Tuberculosis heads the death list in nearly every county in the State of Kentucky.



Death rate for Kentucky, 1911 to 1915.

Whatever methods are finally adopted for the suppression of this disease; its early recognition, backed up with adequate treatment, must of necessity take a leading part in the fight.

DISCUSSION.

Dunning S. Wilson, Louisville: The plea which is being constantly made by those members of the medical profession who are specially interested in tuberculosis seems to fall, more or less, year after year, on dull ears if we measure the improvements by comparatively short spaces of time.

When Dr. Miller came to me some years ago to be my assistant, I told him that the cases that would come to us would be cases sent to us by

the members of the medical profession, and that these cases would be far advanced. He soon recognized that, and the paper he has so ably presented this morning emphasizes that fact, and it is daily being stressed in his work and in the work of those who come in contact with pulmonary tuberculosis.

I will not take up a great deal of your time, but I should like to present for just a moment some advanced sheets of our reports of the work that I and my staff have been doing for the last ten years with especial reference to those cases that come to the institution I have charge of, and they are very carefully studied from their admission until their discharge, and I wish to mention primarily, and to stress the same fact that Dr. Miller has presented, that the cases coming to us are not those that have been, shall I say, early diagnosed. No. They have been diagnosed in the moderately advanced stage. It is not to be expected that men, unless they are very careful and are constantly doing work of this kind, should be able to differentiate the finer physical signs and sounds of the normal from the slightly abnormal incipient case. But one would imagine at any rate that the general profession would be thoroughly competent to make a diagnosis of tuberculosis in its moderately advanced stage.

Out of 968 cases up to the time this report ends, there were 635 cases far advanced, with only 143 incipients, and 190 moderately advanced. These 143 incipient cases were cases that were not found incidentally, but were cases which were searched for because of the routine method of examining all members in a family where there was one case advanced or moderately advanced. What do we find by that method? As the doctor has emphasized in regard to prognosis, the strategic time is in the first few months of the onset of either symptoms or physical findings.

I think it might be helpful probably to mention some of the statistics in regard to treatment which we have worked out to show you what can be done and what cannot be done, and how results are determined by the stage.

If we take our incipient cases, one, two and three, out of 17 incipient ones, there are seven apparent cures. Out of 17 incipients, there are eight apparent cures, four under treatment, and ten unimproved because of other conditions to be worked out. Out of 27 incipient cases, there have been 25 apparent cures. Out of 63 cases moderately advanced, two and three, there were only eight apparent cures, and two arrested cures. Out of 46 far advanced, two and three, there was no apparent arrested case. There were no apparent cures, and quite a number are under treatment.

The symptomatology of pulmonary tuberculosis covers such a wide area that it might be almost set down as axiomatic that the lungs, the

chest, should be examined in all cases presenting themselves for diagnosis. Practically no physician has a patient come into his office that he does not have them lie down on the examining table and examine the abdomen or run his hand along the nerves or something of that sort. At any rate, he makes some sort of examination, or else he is a charlatan, and is getting his money for something he has not earned, and if the doctors will be careful and will examine the chest these cases will be found to have pulmonary tuberculosis, and they may have other things.

I have in my pocket now a report of nearly 3,000 cases in which quite a large percentage have all the different conditions that we meet in other work.

In this connection, Dr. Miller asks me to say he will be glad to show any physician who is interested over Hazelwood Sanitarium.

President Kincaid, Catlettsburg: It is the only institution in Kentucky of which I have knowledge for the treatment of tuberculosis exclusively. Except in such counties as have established sanitariums for the treatment of tuberculosis, it would be better if we sent patients to Hazlewood, at Louisville, rather than to Colorado, New Mexico, North Carolina, or some where else.

Carl Weidner, Louisville: We all agree, I suppose, with the dictum laid down by the essayist, that early diagnosis is very essential in cases of tuberculosis. Personally, I am pessimistic as regards the cure of tuberculosis. If we want to do any good, we ought to do it early; in other words, we ought to diagnose the disease early in order to have any chance to help the patient. That is all we can do. Nobody can help him after a certain period. I venture to say, that of the 65 per cent. of Dr. Wilson's cases the majority will die of tuberculosis, sooner or later. Those twenty-five or thirty per cent. he mentions out of the 968 cases may have a chance to live a long time and become useful citizens, but most of them will die eventually of tuberculosis.

Dr. Miller has mentioned methods of examination. We have physical and other means of making a diagnosis, but do we always use them? No. Physical examination depends to a large extent upon one's experience in practice. The hearing of one physician will be more acute, or his touch will be more delicate than that of another, but there are difficulties in all our methods. Often we suspect rather than make a diagnosis. We have a lot of symptoms as mentioned by the essayist which lead to the suspicion of tuberculosis, but we must verify the diagnosis by careful physical examination and biologic tests. I have, however, many cases where I "suspect" tuberculosis, and I put such "suspects" upon methods of treatment just exactly as if I had positive proof of tuberculosis.

We neglect, besides physical means, modern

means which will enable us to make a diagnosis, such as the various tuberculin tests. These tests, when properly and carefully made, are valuable aids in diagnosis. Again, we neglect to watch our patients closely at this stage. The patient ought to be put under careful observation after we consider him or her a suspect. The early tuberculous patient may not show the presence of tubercle bacilli in the sputum. As has been correctly stated by Dr. Miller, when you find tubercle bacilli in the sputum the patient is not in the most incipient stage of the disease. It means something has broken down before the tubercle bacillus appears in the sputum. In those cases in which no tubercle bacilli are present in the sputum there will be little or no danger to the rest of the neighborhood. The patient who spits bacilli becomes a danger to those surrounding him. This is of interest when we are asked to decide whether a teacher for instance should be permitted to continue in service.

Whenever we have an advanced case of the disease with the presence of tubercle bacilli in the sputum, then is the time we ought to put the patient under surveillance and protect his neighbors. In the early case the neighborhood does not need protection, but the patient does. I vividly recall an instance in the country where there were three or four tuberculous patients crowded together in one room, with a big wood stove going; one of them with tuberculosis of bone, and the others with tuberculosis of the lungs all living, eating and sleeping together in one little room. There is the opportunity for lessons in hygiene.

What we need are sanatoria for the incipient cases of tuberculosis and hospitals for the advanced cases.

J. T. Reddick, Paducah: I would like to ask Dr. Miller in closing the discussion, or some one who has had a great deal of experience in the treatment of this disease, to tell us whether or not we can always depend upon these tuberculin tests as diagnostic means, and to tell us also something about the treatment by tuberculin and the special make of tuberculin. This is an important subject, and what I want to hear is something that the general practitioner can take home with him and treat these cases that will not go to a tuberculosis sanitarium. It is important to us all to know something about the positiveness or the reliability of these diagnostic tests, and whether or not tuberculin is the agent to use.

I. A. Shirley, Winchester: What is the earliest time in which we can find tubercle bacilli by bacteriological tests?

A Member: What time should we begin with the use of tuberculin in the treatment?

The President: We are dealing now with the diagnostic phase of the subject. The phase of treatment, as I understand, is not dealt with in

the paper, and that opens up such a wide field that I doubt very much the advisability of going into that except in the briefest manner.

Virgil E. Simpson, Louisville: I have used tuberculin as an aid in the diagnosis of tuberculosis for some considerable time. It must be understood that it is merely one of the diagnostic features in arriving at conclusions as to whether or not a given patient has had tuberculosis or is now tubercular. Just as it is true with reference to other agents of this character, they are merely one of the indications that point to a general conclusion.

With reference to the diagnostic value of tuberculin, I think it is pretty well understood that so soon as a patient develops tuberculosis and there is a sufficient amount of toxic material from the constant activity of the bacteria, with their absorption into the general system and the consequent and inevitable formation of antibodies, just that soon will the patient react to tuberculin. In other words, when a patient has developed the disease to the extent that his body is making an effort at defense, just that soon tuberculin, from a diagnostic standpoint, will result in reaction. These reactions must be understood to be absolutely and wholly local, as we see them, for diagnostic purposes.

General reactions do not occur if the tests are properly made. They do not cause a rise in temperature and the patient feels no systemic inconvenience. It is a localized manipulation on the part of the diagnostician and a localized response on the part of the patient. The veterinarian injects the tuberculin subcutaneously in cattle and he observes in them, if tubercular, the general symptoms of fever with its accompaniments and focal disturbances in the tubercular lesions. Identical results are obtained in the human when tuberculin is injected hypodermically. But this method has a potentiality for harm as in tubercular laryngitis and is of little or no value in acute processes where fever already obtains. We are discussing here the so-called cutaneous tests, wholly harmless, easily made and, when intelligently interpreted, are of diagnostic value. There are three methods of making this test deserving of recognition. The von Pirquet is done by removing the cuticle over a small area slightly larger than a pin head with a knife or needle as in ordinary vaccination. The arm or forearm is usually selected. I denude three areas leaving, preferably, the upper one for the control. A drop of Koch's old tuberculin is applied to each of the two lower areas and after waiting some five minutes a sterile dressing is applied held in place by adhesive strips. Some reaction occurs at the denuded areas within a few minutes which is purely traumatic and disappears shortly. In from 24 to 48 hours, usually, there appears in the tuberculin-inoculated sites an area of redness and swelling from a half inch

to an inch in diameter. It resembles the hyperemic condition following a bee sting somewhat, and can be felt as well as seen. Vesication is not usual. The evidences of reaction disappear gradually and by the end of the week are gone; the younger the patient the more rapid the course.

The next most commonly used method is the Moro. In this the tuberculin is incorporated with hydrated sheep fat, and equal parts, and a small amount is rubbed into the skin over an area of the size of a silver dollar. The abdominal region is a convenient site. Hyperemia with nodulation indicates a positive reaction, the number and size of the nodules serving as an index to the intensity.

A less familiar method is that of Mantoux which consists of injecting the tuberculin into the superficial layers of the skin with a hypodermic syringe. One or two drops of a 1-5000 dilution is sufficient. A control of normal saline may be used a short distance away. The reaction in this method consists of a hyperemic area in the center of which is a papular elevation. The time periods of the Moro and Mantoux methods are about the same as von Pirquet's.

In choosing between these methods, I believe the Mantoux to be the most delicate and the Moro the least so. The ophthalmo-tuberculin or Calmette reaction, though the credit is due Wolff-Eisner, is, in my opinion, too dangerous to use, because of the possibility of a serious conjunctivitis particularly if there should be an abrasion of the cornea already existing. While it is claimed this method will show a more recent infection, I am mentioning it wholly with the view of condemning it.

Another thing you must bear in mind is that a tuberculin reaction secured in one of these ways does not necessarily mean the patient is suffering from active tuberculosis now. A child may have been tuberculous when three years of age and recovered; but, at twenty that individual may come under observation for diagnosis; tuberculin test done and a reaction obtained, and yet be free from tuberculosis now. In other words, and permit me to emphasize it, a reaction means a patient has had or has now, tuberculosis. You must read the physical signs into your interpretation of the value of the tuberculin test.

Arthur T. McCormack, Bowling Green: The phase of this paper which appeals most to one who is interested in the matter from the standpoint of public health is that it deals with the first signs; in other words, it is a primer and for beginners. It is an essential part of the campaign for the eradication of tuberculosis that has now been undertaken in Kentucky as well as in other states of the Union. First, we must by all the means at our command establish as definitely as possible the actual diagnosis of tuberculosis; but in the meantime we must recognize and establish a suspected diagnosis of tubereu-

losis, and these patients must be classed as suspects and treated as tubercular if we hope to get them well. The suspected cases can be cured, and after the diagnosis is really and definitely made by the average one of us, it is with great difficulty we can do anything at all.

The next great step, after making the diagnosis is to develop amongst the people a health conscience. This must be done through the children because it is difficult to create a health conscience in the adult that makes him understand that when infected with tubercular germs he is a center for their spread, and as Dr. Weidner has said, and we cannot say it too often, four-fifths of the doctors never say anything to the people about these things except in medical meetings. It is the keynote to preventive medicine; it is the keynote to getting rid of tuberculosis. When people have germs of tuberculosis in their system and spit them out, they not only reinfect themselves, but they infect others. As soon as we have developed sufficient knowledge and aroused the health or moral conscience of the people so they understand that it is just as criminal to scatter the seeds of disease as it is any other poison, we will have won a great battle in the fight against endemic diseases. While we have taken great steps in epidemic diseases, we have not reached the beginning in the fight against tuberculosis because we have not decreased the death rate in all we have done and have not yet even convinced ourselves of our own individual responsibility in the matter. We never will decrease it until the individual doctor tells every single patient suspected of tuberculosis who may have the symptoms Dr. Miller has so beautifully and clearly enunciated, that if this condition is not relieved, if it should continue and be neglected, they are likely to be the victims of this disease. It is particularly essential to give this instruction and advice to the poor. Under our system of government it is difficult to control our jails and poor houses and pauper residents; they are crowded with people who have the incipient signs of tuberculosis, and who are being taught nothing practical in the prevention and cure of the disease. Until we have adequate arrangements made and adequate room, with an officer in the field who realizes that he is the captain in the health company, and it is up to him to have every single patient and family brought up as his intelligence will enable him to raise the standard of knowledge, we will not accomplish great things in tuberculosis. It is that feature I want to emphasize particularly, and that part that was reemphasized so well by Dr. Weidner. Until we have a competent effective whole-time health officer in each county to work with the State Board of Health and the State Tuberculosis Commission and with the people, we cannot hope to accomplish the practical results which we

know are necessary to the eradication of this disease.

J. S. Lock, Barbourville: There is one part of our education that the doctor needs to consider himself. Coming in contact with a great many doctors, and doctors know better, I find a great many of them when they go to see a patient do not hesitate to expectorate freely upon the floor. It seems to me, we should expect doctors to stop spitting. We must teach this lesson by personal example. We should not spit, and we should instruct our patients not to do so, as by so doing disease is scattered. Let us begin at home by teaching ourselves and our children and our patients.

J. J. Mudd, Hardyville: When we expectorate we reinfect ourselves as well as infect others; but I do not understand how we can reinfect ourselves.

A. T. McCormack, Bowling Green: Patients are constantly reinfecting themselves because they are spitting up bacilli and getting them reimplanted in the same soil. The agriculturist finds that seed corn will develop in a particular soil in which it is replanted, and it makes a better crop, provided it is a good one to start with. In the same way the health authorities agree that the germs of tuberculosis rebreathed by patients become more virulent than they would be from another and different patient. That is of great importance. The suggestion was first made by English authorities and was considered of such tremendous importance that health authorities grabbed at the proposition. It is the only way to appeal to the average tubercular subject. A man with tuberculosis is more or less selfish, and if you can prove to him that he can reinfect himself he will stop spitting. It is astonishing how gladly a tubercular subject will stop spitting if you point out to him the dangers of it.

Carl Weidner, Louisville: With reference to the remarks of Dr. Lock, I want to recall from memory something that happened twenty-five or thirty years ago when you sat on the benches in a medical college and spat tobacco juice over the floor. Spitting was very common in those days. It ought not to be done. I am glad to say, that one of the first things I tell the class is to begin at home. Don't throw around paper; don't spit on the floor when you are teaching people all the time not to do so. I was right twenty-five years ago when I told students not to do it.

W. W. Richmond, Clinton: I live in a county or town where they passed an ordinance prohibiting spitting on the sidewalk. Our Fiscal Court says the people shall not spit on the public highway. I know two or three gentlemen who can testify that after our municipal government passed this ordinance people resumed spitting on the sidewalk. We have no doctors who spit on the floor. (Applause)

O. O. Miller, Hazelwood Sanatorium, (Closing the discussion): In regard to Dr. Shirley's question, as to how early tubercle bacilli are found in the sputum. There is no definite time for finding them. It depends entirely upon the rapidity of the destructive processes going on in the lung. Their presence indicates that ulceration has occurred and is in communication with the air passages, constituting the so-called "open cases." The important point is to have the sputum examined repeatedly. It might take many examinations before the bacilli appear in the sputum. In far advanced cases the sputum is negative at times. Even with concentration methods the bacilli may be apparently absent from a specimen, and yet upon making a suspension and injecting a guinea pig, tuberculosis may develop.

In regard to the tuberculin test: It is well known that these tests do not distinguish between latency and activity. It means that somewhere in the body there is a tuberculous focus which sensitizes the individual; this causes a characteristic response in the sensitized, upon the injection or application of tuberculin by any of the approved methods.

Dr. Weidner remarked that in the examination of school teachers, in the presence of abnormal physical findings, he does not inform the applicant that he is tuberculous providing he is in good health.

Dr. Lawrence Brown in his Diagnostic Theses in Pulmonary Tuberculosis, covers that phase of the question when he says "Symptoms without physical signs demand treatment, while physical signs without symptoms require only careful watching."

Although Dr. Weidner may find a tubercular process, it may not be active; it may be the remains of an old infection years ago; certainly that patient should not be excluded from teaching school because she has evidence of a healed lesion.

She ought to know, however, that at one time she was tuberculous. She should have the benefit of that information in order to put her on guard; with instructions that on the first signs of impaired health, she shall seek the services of a physician and be examined.

One physical examination is not sufficient to exclude tuberculosis. In suspicious cases the patients should be examined repeatedly and duly warned of their condition. I am able to corroborate Dr. Weidner's experience in regard to the prevalence of tuberculosis in the country. This is not strange when we consider the conditions under which the poorer classes live. Their abode is not infrequently a two-roomed shack with very small windows. One room serves for a bedroom and as a general living room, which is invariably overheated. The family sit around the stove and chew and expectorate in a box of sand or sawdust nearby, and frequently on

the floor; the children in crawling over the floor, soon become infected where there are open cases of tuberculosis.

I am sorry the gentlemen did not lay more stress on the history. I think that is a very important phase of every examination.

In regard to spitting, one of the speakers (Dr. Richmond) mentioned a county in which they were about to pass a law prohibiting expectoration on the streets. Before such a law is passed adequate provision should be made for the disposition of the sputum. Direct sunlight is one of the best germicides we have for the tubercle bacilli, "killing it in a few minutes to several hours, according to the thickness of the layer and the season of the year."

As to the use of tuberculin, and its indication: This subject is so large that it will permit only of the briefest mention. In Europe there is a tendency to a wider use of tuberculin than in this country. In America the tendency among phthisiologists is to reserve tuberculin for those early cases which are afebrile; and those which are running a slight but persistent temperature. You will find tuberculin very beneficial, in those cases which have progressed, under hygienic treatment, to a certain point and then remain stationary.

It is manifestly wrong to begin treatment by the administration of tuberculin, in a case with active symptoms of the disease, such as fever, haemoptysis, cough, expectoration, and gastrointestinal disturbance. The first and most important thing in these cases is not specific treatment, but a radical change in environment; such as obtains in general hygienic and dietetic treatment with enforced rest.

In early cases that are progressing satisfactorily it is not so much a question of will this patient get well without tuberculin, as a question of will he remain well without tuberculin. Those cases which have taken a thorough course of tuberculin relapse less frequently than those who have not taken tuberculin.

In moderately advanced cases where complete recovery may not be expected, much may yet be accomplished by inducing increased fibrosis by judicious focal hyperaemia.

Preparation of Tetanus Antitoxin.—Ruediger states that a suitable strain of the bacillus of tetanus will usually produce potent toxin when grown in nearly neutral glucose broth under hydrogen. The acidity of the broth will rise to more than 2 per cent. normal acid, and it should be neutralized with sodium hydrate before it is injected into the horse. Potent tetanus toxin was obtained by the method described by Hall. By this method the acid is continuously neutralized by the magnesium carbonate present.

THE MEDICAL TREATMENT OF INCOMPLETE ABORTION.*

By BERNARD J. O'CONNOR, Louisville.

The frequency of voluntary and involuntary abortions, combined with the many dangers incident thereto, makes this a vital and important subject. During the past two years the author has attended almost as many untimely interruptions of pregnancy as patients at full term. The fact that at least 24 cases of abortion have been handled during this period without resorting to any instrumentation or surgical measures, and with perfectly satisfactory end results, constitutes an experience which is worthy of review and study.

It is scarcely proper to speak of the medical treatment of any disease or abnormality without discussing the causes thereof and their relationship to the management of the condition. As much, however, as we would like to hear this phase of the subject discussed your essayist shall pass up this part to anyone who might offer something of value, feeling that he has nothing special or useful to contribute and that he might talk a great deal and say nothing. It is the laity rather than the profession that needs enlightenment on the gravity and seriousness of criminal and voluntary abortions.

The Scylla and Charybdis of this much traveled sea are hemorrhage and infection. But few cases, as we know, escape without symptoms of such complications. In the past these alarming complications have almost invariably made the average practitioner resort to rather drastic surgical procedures—the outcome of which while satisfactory in many cases, in many others seemed to do more harm than good.

Two distinct facts stand out prominently in the causation of hemorrhage and infection. In the former, that the uterus contains some foreign body which it is trying to expell or that the musculature tone of the uterus is impaired, while in the latter, that infectious material has in some manner been introduced from without into the body of the uterus. Furthermore an unemptied uterus predisposes to infection. With such data in view it is but rational to conclude that the scientific treatment for incomplete and inevitable abortions is to promptly empty the uterus, avoiding at the same time any procedure that might lead to the introduction of infectious material, either into the uterus or the blood stream. Douches, tamponades, curetage of any kind and frequent vaginal examinations, even with the most rigid aseptic technique are incompatible with the latter indication.

That the uterus can be emptied with sufficient promptness and greater safety by the use of pituitrin and ergot than by local instrumentations will, we believe, be soon almost universally acknowledged.

Although medical literature abounds in reports on the value of pituitrin in the second stage of labor but little or nothing has been said in regard to its employment in cases of abortion or premature labor. After an examination of the literature at our disposal we found but three references to its use in such cases. The only favorable case report discovered was in our own State JOURNAL. Two earlier reports by Watson in the *Journal of the Canadian Medical Association* and Hofstatter in Germany, both of which seemed to show that pituitrin had little or no effect on uterine musculature prior to full term, are evidently responsible for the current general opinion as to the uselessness of this drug in abortions. Both of these reports, however, antedate the day of reliable methods of standardizing the drug, and also its marketing in ampules which lessens its deterioration, and therefore cannot be accepted as final. Both observers acknowledge moreover that it revealed certain possibilities, the former stating that its effects are uncertain but may be good if sufficient dosage is given, and that it is a marked synergist to ergot and distinctly heightens its effect; while the latter remarks that the lack of results may have been due to insufficient dosage or deficient standardization.

Anyone familiar with the effects of pituitrin in labor easily realizes that this drug is a most valuable addition to the therapeutic armamentarium of the obstetrician. The labor is shortened, the afterbirth is passed promptly, the patient is usually able to void naturally within a few hours, the bowels usually move without a purgative, and the patient often remarks in comparison to previous experiences of a general feeling of well being. The absence of exhaustion and the disagreeable after effects of a tedious labor are as clear to the patient as the physician. In a large majority of prolonged cases its use obviates the necessity for forceps and thus adds to the safety, comfort and satisfaction of both mother, baby and the doctor. As we have already designated pituitrin, the "medical forceps" in labor, the author believes from his experiences in connection with its use in cases of abortion, that the medical profession will soon bestow it with another iron cross by accepting it as the "therapeutic curette" for abortions.

Whether this product in any dosage could bring on an abortion or premature birth the writer is unable to say, but that it will assist

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nature's efforts to empty the uterus at any stage of pregnancy once the process is fairly under way can be readily demonstrated by anyone. The more advanced the pregnancy the more distinct and palpable the uterine contractions will be, but even in the first weeks of gestation when an abortion is inevitable very evident manifestations will follow its administration—namely, a distinct increase in pains and the early passage of clots and intrauterine contents.

It should not be presumed that the administration of this drug in cases of abortion will elicit as powerful or as magic results as it does when given in the second stage of labor, since the uterine musculature is not as fully developed as at term and the size of the uterine contents is minimal. There is an additional possibility in that the secretion of the pituitary gland is more abundant in the blood stream in cases of actual labor than in those of its untimely interruption. It has been noted by the writer, that in at least 80 per cent. of his cases, that within two hours after the administration of 1 cc. of pituitrin hypodermatically and a teaspoonful of the fluid extract of ergot by mouth the remaining products of conception will be passed. In a few patients it was necessary to give a second cc. of the drug. Ergot is given every 4 to 6 hours thereafter until the flow is normal. Pains and the passage of blood clots should invariably be taken as an indication that the uterus is unemptied and that both drugs should be continued. It has been the writer's custom to follow the pituitrin with at least two doses of ergot, thus allowing an 8 to 12 hour interval until his next visit and hypodermatic injection if needed.

As it would prove too monotonous to make case reports we shall attempt to summarize our routine and management in cases of abortion. Unless the threatened abortion is inevitable no drug except an opiate or some sedative is used. Absolute rest and quiet is ordered. The patient is instructed to preserve for examination all napkins and discharges. Moist warm antiseptic pads of a 1 to 2000 bichloride solution are to be kept next to the vulva. If shreds or portions of the products of conception pass or have already passed, or the abortion proves otherwise inevitable a c.c. of pituitrin is administered and ergot ordered. Unless there is some distinct indication for a vaginal examination such as a reasonable doubt as to the exact diagnosis or the presence of a foul discharge no such examination is made. We believe it best to explain to the patient why the examination is deemed unnecessary and unwise. If the examination is desirable prepare yourself and your patient for it as carefully as you would

for the application of forceps. Be certain to sterilize your speculum before using it.

In all probability but few women have met death as a result of the hemorrhage attending an abortion, it may alarm the laity but its immediate effects need scarcely ever prove any cause for rashness on the part of the doctor. The possibility of introducing or activating an infection of a serious nature is, however, a matter of which the laity know or think little and of which even the profession needs greater respect. Puerperal infections to-day are fortunately comparatively rare but such is not the case in abortions. The principal reason thereof is that the laity and profession is not sufficiently versed in the lesson that both types of cases require similar measures management.

We do not wish to be understood in the sense that indications demanding surgical interference never occur in cases of abortions—complications, such as perforation of the uterus, distinct abscess formation may call for surgery or death. We do hold, however, that quite a large proportion of the present surgical procedures in cases complicated by a sapraemia or septicaemia are fraught with the greatest danger both to the future health and life of the patient. The non-interference treatment suggested by Winter and fully corroborated by Benthin has unquestionably reduced both the morbidity and the mortality in abortions complicated by infection. The virulent streptococcic infections of the uterine tissues should be considered as much a contradiction to surgery as an active erysipelatous lesion of the skin. With the Fowler position, the use of the proctoclysis of Murphy and the employment of rational medical and biological agents the practitioner can do far more than the surgeon with his curette, his scalpel and drainage tubes.

It should be remarked that not all infections are due to the carelessness of the attending physician, the lack of aseptic precautions in the induction of abortion and the ill advised use of douches, and the frequent presence of virulent but subacute infections are unquestionably the most common factors. It is not compatible with the scope of this paper to enter into any further detailed discussion of the various features of post-partum or abortion infections or their treatment.

Ergot by mouth, or hypodermatically, is of itself one of our best agents in combatting these infections, it should be given in doses sufficient to keep the uterus contracted. The preliminary and early administration of pituitrin, bringing about clonic contractions and strengthening nature's efforts to remove the offending material from the uterine cavity gives us a valuable and in many cases an

almost indispensable adjunct. If necessary as many as four, or even more, injections of this drug could be used at 4 to 8 hours intervals without doing harm. It has been our experience so far that one does is sufficient. In two cases a second injection was required but in both instances the abortion had started or partially occurred several days before we were called on account of the profuse bleeding and the persistence of pains. If the pregnancy is sufficiently advanced to feel the uterus above the pubis, or if it is sufficiently distended with clots to make it palpable on external examination, distinct clonic contractions can be felt in a few minutes after the injection. We ordinarily do not make it a custom to remain with the patient until all the products are passed, because after the administration of these two drugs a short wait will reward us with the passage of clots, placenta and other offending materials. As a rule these are not completely extruded until the patient gets up to void. We believe it wise to refrain from the use of a bed pan and to instruct all puerperal cases to use a commode.

In our series of 24 cases, no vaginal examination was made in six, in seventeen one examination only was made, and in one a second examination was necessary. No local treatment of any kind was used or permitted except the moist antiseptic application to the vulva. In no instance was catheterization required. In 18 cases the bowels moved within 24 hours without a purgative. In but two instances was the bleeding anyway severe after the administration of the pituitrin and ergot, and in both of these patients the symptoms had existed for at least four days before our attendance. One of these patients appeared almost exsanguinated and had a pulse rate of 120, the uterus was distended to the level of the umbilicus with clots. The recovery was somewhat slow in both cases but satisfactory, despite the fact that only two doses of pituitrin and two ounces of ergot was used. In this type of cases we believe that the pituitrin should be used more freely.

In at least 12 of the cases the abortion had been induced by local measures either by the patient personally or, a would-be friend. Four of these showed distinct evidences of mild infections which yielded to very simple measures. Another infected case, which we regret to say had been induced by a catheter doctor, appeared very alarming, she gave a history of two severe chills within the twelve hours prior to our attendance, her temperature was 104.5 and the lochial discharge was a brownish tint and extremely foul. A catheter which had been left in the uterus was removed, she was placed in the Fowler position,

with hot applications to the vulva and lower abdomen and given pituitrin and ergot. Within two days her temperature had dropped to 100 and on the fifth day her condition was normal. About three weeks after her convalescence she suffered with an attack of pyelitis which yielded nicely to hexamethylene. It seems probable to your essayist that pituitrin may possess a further beneficial effect as an immunizing agent.

DISCUSSION.

Edward Speidel, Louisville: I would like to endorse one statement that Dr. O'Connor made in his paper and to go a bit further in that, and that is the avoidance of all vaginal examinations in cases of abortion unless there is a positive indication for them; and in my treatment of abortion, contrary to the treatment just spoken of by the essayist, the indication is active interference, and under such circumstances an examination in addition is to be made in a vagina that has been previously thoroughly cleansed with soap and hot water and thoroughly douched, and this examination is to be made with gloved hands.

I am surprised to hear of the success of Dr. O'Connor's treatment. I did not know what his medical treatment of abortion was to be, and I am a little astonished he has caught me unawares. I am an ardent advocate of the use of pituitrin in full term labor under certain circumstances, and I limit the indication for pituitrin in full term labor to cases in which the cervix is fully dilated, the bag of waters has ruptured, and the presenting part has descended into the pelvis. If it is used in full term labor under other circumstances you will find you will have trouble.

I was called to a case not long ago in which there was hour-glass contraction of the uterus in consequence of the abuse of pituitrin. From the literature, I have been led to believe that pituitrin will not bring about premature labor, neither will it bring about abortion or miscarriage, consequently I am a little bit astonished at the claims the essayist makes in his paper, that in an incomplete abortion pituitrin will produce sufficient contractions of the uterus to bring about a loosening of the material which is adherent in the uterus and expel it in that way. However, he comes before us with successful cases, and those who have not used the drug under these circumstances and have not had experience with it, have no right to criticize him unless we are in a position to say whether his results are the same as we will have or not. I judge the combination of pituitrin and ergot in an abortion—and by that I am referring now to the interruption of pregnancy in the first sixteen weeks—would be to imprison some of the contents of the uterus, and in consequence, after the effect of the pitui-

trine and ergot wears off, infection might start in the imprisoned contents of the uterus and you may still have to open. He speaks of those cases in which he begins with infection, and it is expected that these drugs will limit infection to the surrounding structures by the contracting effect the pituitrin and ergot have on the uterus. Every one knows that was the former treatment in puerperal infection at full term. When there was puerperal infection the uterus was kept contracted with ergot to limit the spread of the infection.

Another thing that is not clear to me is this: I generally divide abortions into two stages, early abortions, and late abortions. By early abortions I mean those abortions that occur before the second month; at that time you have a thickened endometrium. An endometrium which under ordinary circumstances is one-eighth of an inch in thickness becomes half an inch in thickness, and known as the decidua vera. After the second month you have placental formation. In the early abortions this thickened decidua vera may remain imprisoned in the uterus, to become infected after the effect of the pituitrin and ergot has worn off, and you would have a secondary condition that would lead to a great deal of trouble. In case the treatment that the essayist has outlined should fail, if it came to an attempt to invade the uterus, with a uterus contracted so tetanically with pituitrin and ergot, you would have some difficulty in producing sufficient dilatation to empty the uterus in the recognized way.

J. L. Atkinson, Campbellsville: It seems to me, this is one of the most important papers that can come before this meeting. The subject is an important one. From what Dr. O'Connor has said, he is blazing the way for us to follow. If we can manage our cases of abortion as well as he has managed them with these drugs, it is an important step in advance of what we have been doing heretofore; notwithstanding the fact that my experience, like that of most of you, is that in these inevitable abortions simple surgical means are very satisfactory. We have very little trouble afterwards; but if these drugs produce the effect stated, it is a step in advance.

What I want to say more than anything else is to ask two questions. First, does Dr. O'Connor get results in those cases of abortion where the sac has been ruptured, and nothing of the placenta remains? Again, he spoke of the advanced cases. We all feel the uterus above the pubes. Does he give this medicine with vaginal examination. We now give pituitrin when the os is not dilated. I would like very much for him to answer those two questions in his closing remarks.

B. J. O'Connor, Louisville. (In Closing): The way I happened to come to the use of pituitrin was accidentally. In an emergency case, I had no ergot on hand. I did not care to make any exam-

ination, but still wanted to have the hemorrhage controlled by some agent.

I would not hesitate, in reply to the doctor's question, about giving pituitrin once I was certain that abortion had started, or the sac had ruptured. If shreds of membranes had passed and the placenta was still retained, I would not hesitate for a moment to give pituitrin. The cervix would have to dilate some time or other, no matter whether it be dilated by instruments or by nature, and nature in this instance is a considerably better doctor than surgical instruments. Pituitrin will bring about a clonic contraction or an intermittent contraction. You will have a distinct contraction for twenty or thirty seconds, and then a slight relaxation, but not the same relaxation you had before.

As to the second question in regard to the dilated os, it can be answered by the fact that nature will dilate the os. It is bound to do it. It is not necessarily determined by your finger. It is dilated to some extent, otherwise portions would not have passed already.

In regard to Dr. Speidel's objection, that it would be impossible to resort to the use of surgical instruments after the uterus is tonically contracted by ergot. Ergot cannot go beyond nature's contractions, and I feel, with all our levers and instruments, dilatation could be easily accomplished under any such conditions. I do feel this much about the subject, that every one of us should try to manage these cases without resorting to undue and unnecessary examinations and instrumentations. I feel if any man here decides to wait for twenty-four or forty-eight hours before using his curette or corkscrew, or anything of that kind, or even a piece of gauze, to clean out the uterus, subjecting his patient to anesthesia and other measures, and use these two drugs during the time he will learn that it will not be necessary to resort to the means he contemplates, and that at least 90 per cent of such cases require nothing more than a few doses of pituitrin and ergot.

NOTE: Since reading this paper the writer was called to attend a patient, who had had an attempt to produce a criminal abortion at the fifth month, performed some two weeks previous. She had pains for a period of over twenty-four hours. Examination showed a hand and arm protruding through the cervix. This was returned and the feet brought down. After waiting patiently for over thirty minutes and finding no progress we administered a c.c. of pituitrin. The pains promptly became harder and the body with the arms and shoulders passed into the vagina, but the head failed to be extruded. Examination showed the cervix to be rather tightly contracted about the neck of the foetus. No change occurred in this spasmodic condition of the cervix despite frequent and hard pains for at least 30 minutes. We then attempted to dilate

the cervix, and make traction on the foetus with the pains. As a result of this pulling over the shoulders we extricated a macerated seminecrotic foetus minus a portion of the neck and the head. Examination showing continuous spasm of the cervix, digital dilatation and Crede's method was practiced for a considerable time to bring about extrusion of the head, but without result, until the patient was allowed to get up to defecate. After this we spent over an hour fruitlessly endeavoring to remove the afterbirth. Another c.c. of pituitrin was administered and ergot was ordered by mouth. We left the patient feeling certain that it would probably be passed in a few hours. In this instance, however, we were disappointed and at the end of twenty-four hours we had to give this woman an anesthetic, dilate the cervix instrumentally and remove the seminecrotic placenta with a dull curette. The uterus was swabbed out with iodine and packed for twenty four hours with iodine gauze, the patient was placed in the Fowler position. This woman was sapraemic from the very first moment I saw her and two days after the removal of the placenta her temperature was 103 and pulse 120. On the third day her septic symptoms subsided and her convalescence was then normal. Salines, ergot and drugs by mouth to increase the uterine flow and the Fowler position were the only additional measures of treatment.

This case is reported first because it showed one in which pituitrin and ergot apparently had more effect on the lower uterine segment than on that of the fundus and may possibly have done more harm than good. Secondly, because it demonstrated that the use of these drugs does not interfere greatly with the instrumental clearing out of retained after products. The author has attended similar still births in earlier years which were accompanied by no such troublesome or threatening complications as were manifested by this patient, but that the pituitrin and ergot were responsible for a major portion of her complications and difficulties seems to him somewhat doubtful.

Laws Governing Rate of Excretion in Man.—

The excretion of urea and of chlorids in the normal individual, McLean says, is carried out according to definite laws, capable of numerical expression. The rate of excretion of urea and of sodium chlorid is determined by the concentration in the blood, the rate of water output, and indirectly by the weight of the individual. The threshold of sodium chloride excretion is practically constant at about 5.62 gm. of sodium chlorid per liter of plasma. Slight variations in the threshold occur in normal individuals. The rate of excretion of urea under the conditions found at any time can be measured directly in terms of the normal by an index of urea excretion.

FACTS IN OPHTHALMOLOGY ESSENTIAL TO THE GENERAL PRACTITIONER.*

By T. W. MOORE, Huntington, W. Va.

That ophthalmology, which is probably the most exact branch of medical science, has been largely a closed field to the general practitioner is, I think, usually admitted. This would be well were it, like dentistry, seldom that conditions arose where immediate and decided action was necessary, but unfortunately too frequently you are confronted with emergencies, such as wounds of the eyeball, or to determine between glaucoma and iritis, when it is imperative that the proper measures be instigated at once, and where, if a misstep is made, the results may be the loss of the eye or even blindness of both eyes, a condition which often is more terrible and far reaching in its consequences than death itself.

In examining eyes the Berger's loupe is of the greatest service and is, I think, the easiest way of using oblique illumination. This leaves both hands free with one of which you can hold a condensing lens thus throwing the light on the eyeball when the cornea, iris and pupil can be carefully and leisurely inspected. This loupe, or a modified form, should be in the armamentarium of every physician as it is of great value in skin diseases, searching for foreign bodies in the eye and wherever they may be on the external surface of the body,—splinters for example. With very little practice one is able to work with the loupe with its greatly magnified field.

You as general practitioners will probably have an opportunity to act more frequently in injuries to the eye.

When a patient presents himself under such conditions and the injuries are limited to the eyelids, such wounds are treated as are wounds of the skin or mucous membrane in other parts of the body, special attention being given to the careful approximation of the tissues, especially any wounds in the cartilage at the lid margin. If this is not looked after an unsightly notch will follow. My personal preference is for horse hair ligatures applied close to each other. The same anti-septic precautions must be observed here as elsewhere.

Von Graefe called attention to how readily wounds of the eyeball heal. This has been observed by all ophthalmic surgeons. So in penetrating wounds of the eyeball the first step is the instillation of a sterile cocaine or alpin solution to relieve the pain and then with the lids held apart the eyes should be

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thoroughly douched, and as, phenol and bi-chloride solution in sufficient strength to be effective, are injurious to the delicate epithelium of the cornea, use only warm sterile salt solution or saturated solution of boric acid.

If the wound is extensive and vitreous has escaped to any extent the eye is almost certainly lost and if allowed to remain in the orbit will be atrophic and a possible source of sympathetic inflammation of the other eye.

Wounds of the cornea as a rule admit of a more favorable prognosis than those of the sclera, probably due to the infecting organisms being washed away by the aqueous humor. If seen within twenty-four hours after the injury and only the cornea is involved and the iris has prolapsed it should be picked up by a pair of delicate forceps and just enough force exerted to hold it taut when with one snip of a pair of sharp scissors the protruding portion is excised close to the cornea. The iris will usually retract from the wound, the edges of the cornea where injured approximate and heal by first intention. If the wound be extensive it is better to separate the conjunctiva all around the cornea and pass a purse string suture through its free margin, and pull this tight so that the cornea is completely covered. The conjunctiva only adheres to the wounded surface, and in a few days slips back leaving the edge of the wound thoroughly closed against infection.

If more than forty-eight hours have elapsed before surgical treatment begins the prolapsed iris will be firmly sealed to the corneal wound by inflammatory exudation and it is better to allow the wound to heal and later after the acute irritation has entirely subsided the prolapsed portion, if still protruding, can be burned off to the level of the cornea by the actual cautery heated to a dull red heat, care being taken not to open the anterior chamber, and after this covering the cornea with conjunctiva.

Wounds of the sclera do not heal so readily as those of the cornea and their treatment is more complicated and should not, in my opinion, be attempted by any one who has not had special training in ophthalmology.

Frequently, after blows involving the eyeball, we are puzzled as to whether that organ has been injured as there is no apparent manifestation of the injury; here testing the vision is often a great aid for if there is no impairment of vision usually there is no great injury of the internal structures of the eyeball.

A patient presents himself to you with an irritated or irritable eye, stating that it waters, is painful, and may or may not be sen-

sitive to light. Three conditions suggests themselves to you, viz.: conjunctivitis, iritis or glaucoma. I have tabulated some important points of differential diagnosis:

Conjunctivitis—

Redness, more intense away from cornea.

Pupil, contracted or unchanged. Reacts to light.

Pain, burning or scratching or smarting.

Tension, normal.

Aqueous humor, transparent.

Cornea, normally sensitive. Transparent.

Anterior chamber, normal.

Secretion, mucous or muco-purulent.

Vision, unaffected.

Iritis—

Redness, pericorneal.

Pupil, contracted. Slight or no reaction.

Pain, aching or throbbing, worse at night.

Tension, normal.

Aqueous humor, often turbid.

Cornea, normally sensitive. Transparent usually.

Anterior chamber, deepened or unchanged.

Secretion, no discharge.

Vision, impaired.

Glaucoma—

Redness, pericorneal.

Pupil, dilated. Slight or no reaction.

Pain, aching or throbbing.

Tension, increased.

Aqueous humor, transparent.

Cornea, sensibility diminished. Often steamy.

Anterior chamber, shallow or obliterated.

Secretion, no discharge.

Vision, impaired, a halo surrounds a light.

The sensitiveness of the cornea can be tested by touching with a small piece of absorbent cotton.

Conjunctivitis usually yields readily to mild astringent lotions such as zinc sulphate gr. ss; boric acid gr. x to zzi of distilled water, if of the non-purulent variety; if purulent I am very fond of using 50 per cent. solution or argvrol every two hours and one drop of a one per cent. nitrate of silver solution once daily. Of course it is better to make a bacteriological examination and treat the specific infection but this is frequently impracticable or impossible.

The treatment of the phlyctenular conditions usually must be constitutional as well as local. The local treatment consists of atropine solution and the introduction of calomel or yellow oxide ointment within the eyelids and the eye gently massaged through the closed lids.

In iritis the treatment consists of the instillation of atropine solution and the treatment of the constitutional malady that is the primary cause, this is most frequently lnetic,

then comes gouty or rheumatic causes i.e. the iritis is a manifestation of some focal infection.

Glaucoma if inflammatory requires trephining with iridectomy or if this must be delayed physostigmine or pilocarpine solution instilled often enough to contract the pupil. You will find in this terrible condition that the most skilled assistance that you can obtain will often prove inadequate.

Corneal ulcers are usually accompanied by pain, which frequently extends to the temple and brow, photophobia, and increased lachrymation. Inspection of the eye shows marked conjunctival injection more pronounced in the neighborhood of the ulcer, a contracted pupil, slight muco-purulent discharge and in the very severe cases often pus in the anterior chamber, known as hypopyon. Much may be learned by careful inspection with oblique illumination by aid of the Berger's loupe previously referred to. If the ulcer is in a progressive stage its walls will be opaque and its edges ragged and somewhat undermined; if in a regressive stage, if the reparative process has been established, it will present a cleaner appearance, its walls will be nearly transparent, and its edges rounded off, and especially if it be near the corneal border, newly formed, superficial blood-vessels will, perhaps, be seen running to its margin from the neighboring conjunctiva.

We have much to learn regarding the etiology and pathology of corneal ulcers, but enough already is known to warrant the statement that their malignancy does not depend, upon the mere presence of bacteria, but scarcely to a less degree, upon the character of the opposition—feeble and energetic—which they encounter in their invasion of the corneal tissue. When in consequence of lowered general vitality or unusual local conditions this resistance is exceptionally inefficient, even the less virulent bacteria, may do irreparable damage. (Theobald).

The treatment consists in the instillation of atropine solution often enough to keep the pupil dilated, washing out the conjunctival sac three or four times daily with sterile normal saline or boric acid solution. I like very much the use of a drop of one per cent. solution of silver nitrate, this stimulates the ulcer and at the same time forms a protective coating of albuminate of silver. A protective patch held in place by a light bandage is a very useful adjunct.

I had intended going into the eye diseases incident to the auto-intoxications especially gastro-intestinal but will limit my remarks to a few hints. I make it a rule in all eye diseases to give a thorough purge, as Shoemaker used to tell us "Clean out the prima via."

This will prove beneficial in injuries as well as in the diseases of the eye. I was much impressed a few years ago when Dr. Thompson of Indianapolis stated that he had been able to cure many obscure eye diseases by a thorough course of Pluto water.

I have purposely omitted all reference to refractive errors because the subject is too large for the confines of this paper but will remind you that so many eye discomforts both direct and reflex are due to eye strain and the results from proper lenses, properly worn is often most gratifying to both patient and physician.

The elder Gross used to state to his students that he could tell them all there was to be known about the eye in two lectures of one hour each; this has not been my ambition but to emphasize a few salient points where in my experience the general practitioner most often has been in trouble that he might have avoided had he followed the principles here advocated.

DISCUSSION.

S. G. Dabney, Louisville: I am sorry to say, my nearness to the door prevented me from hearing Dr. Moore quite as thoroughly as I would like to have heard him.

Many of the points he brought out are of great practical value. I think his suggestion of the binocular loupe is a very timely one, and perhaps will be found specially serviceable in his part of the world and in other parts where there are so many mining accidents and so many small objects in the cornea. One suggestion might be worth while, not so much to doctors as to factory managers, that is, we should strongly advise against having one of their employees pick foreign bodies out of the cornea. Over and over again, I have cases referred to me where the cornea has been scratched by an infected instrument by the hands of one of the workmen. I have gone to the managers of companies repeatedly and counseled against the pursuance of such a course, and have told them that if litigation should result it would be impossible for me to testify in their behalf. As a result, they have forbidden it, so the advice has been of some practical value. A year ago I saw one eye lost. The man had suppuration of the cornea, and lost his eye. It began exactly in that way, so I think it is very important that workmen be not allowed to remove foreign bodies from the cornea.

Another point is that these minute corneal ulcers, such as a scratch with the finger nail, where a baby in nursing at the breast throws its hand up and scratches the mother's cornea, cause intense pain out of proportion to the lesion, and cocaine relieves them only a short time. Sometimes tying the eye up, putting on a bandage to prevent movements of the eyelid over the little abrasion has a salutary effect.

I am not certain that the essayist referred to cuts of the sclera. They are not common, yet they are of immense importance when they do occur, particularly sharp cuts, and provided there has not been extensive loss of vitreous, and the lens has not been so injured as to become opaque, which is not so likely to be the case, such cases do very well if promptly and carefully treated. In illustration I may mention the case who fell while holding a glass in her hand. The glass cut a clean wound between one-fourth and one-half an inch in length in the sclera back of the ciliary region. Vitreous was protruding. A bandage was applied; the patient sent immediately to the infirmary and under general anaesthesia the scleral wound was brought together by stitches through the conjunctiva. She was kept in bed for about a week recovered with perfect vision, which she still has after three years.

General practitioners must occasionally treat an eye case whether they wish to do so or not, because there is not an oculist near by enough to refer the case to him. In such a case, if there be a sharp cut of the sclera, with the vitreous escaping into it, they can accomplish a great deal if they will simply put some stitches through the conjunctiva and bring the scleral edges together in that way. I have seen a few such cases. In other cases the vital question is to know whether the foreign body is still in the eye, and the X-ray is of enormous assistance to us.

J. Morrison Ray, Louisville: I want to compliment my friend Dr. Moore on his very practical paper. I do not know that I can add to what he has said. Those of us who are in the larger towns or cities, where there are a great many factories, see many more injuries to the eye that are not seen by the general practitioner; but every practitioner of medicine is frequently called on to treat or to remove foreign bodies from the conjunctiva or cornea, and these foreign bodies may be imbedded in the cornea, and occasionally have penetrated the eyeball. A foreign body on the cornea, as a rule, gives rise to very little trouble, and with a sterile instrument it is easily removed; unless the operation is done under proper precautions regarding cleanliness, many cases of infected ulcers will follow and many eyes lost. It is a habit, I know, in a great many factories for them to have one or two men who are expert in removing these foreign bodies, and I know in one factory where a man used a toothpick for this purpose. In one instance a violent infection ensued, so that the man came near losing his eye. Sometimes they use the blade of a knife that has been used in cutting chewing tobacco.

One thing I would like to call your attention to is that given an eye with the tears overflowing, with a lachrymal canal stenosis, if you get a foreign body on the cornea in that eye, an infected ulcer is sure to follow. That is one reason why

we try to be so careful in the treatment of cases of stenosis of the lachrymal-nasal canal, and why we sometimes urge operation that seems out of proportion to the local condition.

Within the last few days I have seen a lady with stenosis of the lachrymal canal in which by pressure over the lachrymal sac you could extrude a small quantity of pus. I urged operation. She said it did not amount to anything; that she had had it for several years. I told her that if she traveled around over the country and happened to be on a train and get a cinder in her eye and a small corneal abrasion, she would likely lose the eye.

Last month I saw a case that was referred to me by one of my friends in the country. The case started with a foreign body on the cornea; there was a small abrasion of the cornea. When I saw the case the whole cornea was infected and infiltrated. I think many practitioners could abort many of these cases by prompt and active interference, that is, by the use of the actual cautery. I believe in cases of infected corneal ulcer, if they are taken sufficiently early in their development, as indicated by gray infiltration around it and extending into the corneal substance, a probe is heated in an alcohol lamp, and touch the infected area, the chances are you will nip the whole thing in the bud. The best drug for local use is iodoform.

H. B. Scott, Louisville: I think there is no paper which is more interesting to the general practitioner than the one Dr. Moore has just read. If it is a fact that first aid work is necessary in minor injuries of the body anywhere else, it is more so in cases of injuries to the eye. Where the surface of the cornea has been injured and if there is any lesion it becomes urgent, the first treatment should be absolutely sterile, and the abrasion should be cauterized. I think if every practitioner seeing a case of this kind, where the cornea has been injured (I don't mean where a foreign body rests upon the cornea and can be wiped off, but where the epithelial layer has been abraded and infection enters), will cauterize with tincture of iodine, and wash it off immediately with a saturated solution of boric acid, he will get good results. I recall three cases. I enucleated one eye, but saved the other eye. A sympathetic ophthalmitis set in. These conditions occur from neglect. This case came to me after the sight was practically lost. There were corneal ulcers in these cases. It was due to the pneumococcus germ, and not to a mixed infection, that these eyes are lost. Eyes are lost from the fact that the first treatment was not thorough. The work should be done with sterile agents and the wound should be cauterized just as we would cauterize other wounds. I do not see why a wound in the cornea should not be treated with iodine.

A Member: How would you cauterize with iodine?

H. B. Scott: Take a small applicator, twist cotton firmly around it, dip it in iodine, remove the excess of iodine so that there will not be too much to touch the part that is abraded, and wash it off quickly.

A Member: Do you use it full strength?

H. B. Scott: I certainly do and have never seen a bad result follow.

B. A. Bledsoe, Newport: I want to express my pleasure in hearing Dr. Moore's paper, and I shall take up the line of thought where Dr. Dabney left off.

Many of these cases of eye injury, be it large or small from a foreign body, may get well all right, and they may not. It has been my experience to have had several cases of foreign body in the eye as a result of a dynamite cap explosion in which a very small portion of this copper cap would lodge in the posterior portion of the eye. In these cases the eye should invariably be enucleated, and you can only find out whether or not a foreign body is in there by the use of the X-ray. I have enucleated eyes that the average man possibly would say should not have been taken out as a result of my X-ray examinations. If a patient comes to me with a piece of copper in the eye, I would not hesitate to immediately say, that eye should come out because statistics show that copper is the worst kind of metal to have in the eye. In case of injury to the eye the first thing should always be to find out with the X-ray if there is any foreign body in there, no matter how small the wound of the eye. The eye should not be left with a foreign body in there to get well of itself. If the wound be large, there is a chance for the eye to recover without enucleation, and many of these cases get well; but I want to lay particular emphasis on the fact that an X-ray examination should be made, and if there is a foreign body in the eye it should be removed, or the eye enucleated to prevent sympathetic ophthalmia.

The President: We have with us to-day Dr. Wells of Hinton, West Virginia, as a guest and I would like to have him discuss this paper of Dr. Moore's if he will.

E. D. Wells, Hinton, West Virginia: I was very much interested in Dr. Moore's paper because I am in a field where we often see cases in consultation. The question of eye injuries is fraught with a good deal of trouble sometimes. An injury from a cinder is not the one which usually gives trouble, because the cinder when it hits the eye is, as a rule, hot. Ninety times out of a hundred it is hot and sterile and gives very little trouble; but the wounds that cause general trouble are the penetrating wounds of the cornea, and especially injuries such as those that are caused by a sheaf of wheat or coats of grain. DeSchweinitz is of the opin-

ion in his latest book that every case of penetrating wound of the cornea caused by a sheaf of grain is fatal to the sight of that eye. I have had four such cases in the last eighteen months. I have had consultation in three of them, and in every one of them the eye was lost. When these cases were seen by the general practitioner he thought the wound was trivial. The aqueous humor would form and that would be the last of it. They went from bad to worse. When you get a penetrating wound of the cornea caused by a sheaf of grain you are in dangerous trouble.

As to cauterizing the eye, I would not urge the general practitioner to do so. I believe cauterization is just as big an operation or more so than enucleation. You may do a whole lot of good, but unless you have cauterized many eyes you will do great damage. The cauterization of the cornea is a dangerous procedure unless you know absolutely what you are doing.

J. G. Carpenter, Stanford: This is one of the most important subjects to the general practitioner that will be brought before this meeting of the association. If there is anything that the general practitioner ought to know it is the diagnosis and treatment of iritis, glaucoma, conjunctivitis and phlyctenular ulcer. As a rule, general practitioners know nothing about them. They use eserine where they should use atropia and the latter when eserine should be used. Too often they will cocaineize an eye because it relieves pain and dilates the pupil. The cocaine interfering with the nutrition of the eye produces coagulation necrosis, with consequent ulcer, and serious injury to eye is done or the eye is lost. Out in the country I have seen these conditions, and eyes have been lost which in the hands of an expert could have been saved. We expect much from the University of Louisville in the training and teaching of young men in the future, so that there ought to be a course given to the graduates on the eye before they graduate, and no man should be allowed to go out to practice as a general practitioner until he knows something about the eye, especially iritis, glaucoma, conjunctivitis and phlyctenular ulcer. The graduates of the Medico-Chirurgical College of Philadelphia, Pa., are compelled to undergo a rigid examination in ophthalmology and know diseases of the eye as well as other diseases in general practice. The general practitioner should also do refraction and correctly and scientifically prescribe glasses for his clientele and teach his patients how to dispense with the local and itinerant spectacle peddlers "so-called opticians." So mote it be! Selah!

Adolph O. Pfingst, Louisville: I would like to discuss this paper only to bring out one practical point to men who are doing general work. I refer to the relative absence of pain in some injuries to the eye and the danger which may arise from overlooking injuries on account of this

absence of pain. We all know, that a small foreign body in the cornea, which is superficial, causes a great deal of pain, so that the individual can hardly keep his eye open; at the same time, we find that perforating injuries, where the foreign body has passed through the cornea, whether in the vitreous or anterior chamber, are on account of the absence of pain often looked upon as insignificant and then finally give great trouble. This was exemplified by two cases that came under my observation two months ago on the same day. One child, four years old, punched the eye with a stick causing a wound across the cornea. It was a lacerated wound. The mother called me before I saw the child and said, "there does not seem to be much trouble, but I believe you had better come and look at it." In fact the mother made so light of it that I was on the verge of not seeing the child until the next day. This child had a clear cut across the cornea, with the iris out on both sides. This was the abscised and the child has now a perfect eye with the exception of a cataractous lens which can be treated afterwards. On the same day I saw another child in which the wound was identical with the one mentioned. There was a ragged wound across the whole cornea. This case was seen by a practitioner who told the parents that the injury did not amount to anything. I saw the case a week after the injury when the eye was soft and inflamed, and we had to enucleate the eye. This exemplifies the importance of what Dr. Moore has said of examining thoroughly, and if you cannot see with the naked eye, examine thoroughly with the double loupe.

Dr. Moore's paper was very practical for a body of this kind.

T. W. Moore, (Closing): I wish to thank the members of the society very much for the kindly manner in which they have indulged me.

Dr. Dabney referred a minute ago to eye wounds in factory employees. I have noticed that in recent years a great many factories are insisting upon their men wearing protective glasses. I think that is very useful, and I think as physicians we should encourage it. The American Car and Foundry Company has adopted them and they insist upon their men wearing them.

The use of the cautery as suggested by Dr. Ray is most valuable; but I wish to tell you, in using the cautery you must be careful that the cautery is hot, and also that you get it away from the cornea while it is still hot. I remember some years ago when one of my friends cauterized a cornea and allowed the piece of metal to remain in contact with the cornea until cold. He had a horrible time afterwards in separating the cautery from the corneal tissue, and in doing so tore out a piece of the cornea. While the cautery is a useful thing, it must be used with

care. Iodin is useful. Some years ago I was called in consultation where a doctor had painted the irritated lids with tincture of iodine by mistake in a case of conjunctivitis. The patient had a violent inflammation as a result of this, but it did cure the conjunctivitis after a few weeks.

FOCAL INFECTION.*

By N. T. YAGER, D. D. S., Louisville.

Articles on this subject have been a prominent feature of both medical and dental literature for the past four years, and it is seldom that you look over any of the journals of to-day but that you will find one or more bearing directly on the subject. Not only are the scientific investigators burning the midnight oil, but the general practitioners of medicine and dentistry are paying a great deal of attention to, and putting into practice with beneficial result, a great many things that have been brought out by these investigators.

Oral sepsis was perhaps first introduced into medical literature in a paper entitled "Oral Sepsis as a Cause of Disease," (British Medical Journal, July, 1900).

The paper not being written for the purpose of showing dental defects but septic effects, that are responsible for the ill health associated with bad mouths. The statement is also made that septic lesions streptococcal and staphylococcal infection found in the mouth belong to no one department of medicine or dentistry but are common ground on which the general practitioner, or surgeon, throat, nose, ear and eye specialists, specialists in children's diseases, stomach and blood diseases, rheumatic diseases, fevers, skin, nervous and lastly the dentist, all meet on terms of equal responsibility.

From the beginning and the subsequent investigations and papers by such men as Billings, Rosenau, Hoskins, Hartsell, Price, Bass and many others, it has been proven beyond a shadow of a doubt that there is something in the subject worthy of our most earnest consideration.

It has been proven clinically that oral infections produce arthritis, myocarditis, endocarditis, involvement of the lymphatic, and derangement of the nervous and digestive apparatus.

In a paper by Dr. Billings on systemic disease due to focal infection, he says, the infection is probably always hematogenous and this statement is further substantiated by laboratory tests by Hartsell, Price and Atkins.

This being the case, it is up to us to locate the source or the foci of the infection. How?

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

By beginning at the fountainhead, the mouth.

How many kinds of bacteria, micro-organisms do we find in the mouth, both pathogenic and non-pathogenic?

I answer in names and numbers.

Unpronounceable and innumerable, in fact some mouths that I have examined look as if they contained anything from amoeba to horse hair snakes.

So long as the oral cavity and the structure it contains, are in normal condition, the micro-organisms that it contains produce no deliterious results locally and it is only when there is a lesion that they have an opportunity to get in their work.

Dr. Black says, "in the mouth there are three groups of chronic foci."

1st. Deposits of salivary calculi with which may be included certain fillings, bridges, crowns, and which impinge on the gingiva and keep them in a state of constant low grade inflammation.

2nd. Pus pockets along side of the roots.

3rd. Chronic alveolar abscess.

The conditions of the first group are easy of elimination but the second and third are more difficult, but it is usually from the second and third groups that we have our systemic manifestations.

In the second group pyorrhoea stands at the head of the list and I believe causes more chronic systemic disturbance than any other condition in the mouth.

In pyorrhoea we not only have lateral abscess but the opical abscess as well, and it is the micro-organisms in these abscesses which have entrance to the system through the blood stream, and the stomach that destroy the system's equilibrium in one way or another.

I might say in passing that I have never had occasion to examine a diabetic who did not have pyorrhoea.

Whether any significance is to be attached to this fact or not, I am not in a position to say.

In the third group, chronic abscess irrespective of pyorrhoeal condition and the causes are two-fold, lack of attention on the part of the patient, and imperfect dental operations.

The condition of the first group are not only easily diagnosed but easily corrected.

In the second group diagnosis is easy but the correction of the condition without the loss of the teeth is at times very difficult.

Emetin hydrochloride and alcrestia epicac have, from the number of cases reported, proved to be of great benefit in the treatment, but you cannot expect to effect a cure by purely systemic treatment, without the local surgical treatment. I mean by surgical treatment the removal of all the calculi on the roots and

obliteration of all pus sockets and putting all teeth that can be saved in a condition that they may perform their normal function and also the return to health of the surrounding structures.

In diagnosing conditions of the third group the X-ray is the most reliable as it not only shows the exact location of the abscess, but the condition of the root and surrounding bony structures.

An attempt is often made to save an abscessed tooth that would have been extracted had a radiograph been taken.

I believe more teeth are supposed to be saved to-day that should be extracted than there are teeth extracted that should be saved.

In a number of cases beneficial results have been obtained by using a vaccine made from material taken from socket of extracted abscessed tooth, although after removing the cause nature responds very readily and improvement is soon observed.

Just a word about X-ray pictures. I prefer the small dental radiograph to plates from several reasons. You do not have the distortions, the superimposing of other parts, and they are more easily read.

To be able to correctly read the radiograph is very important.

In conclusion I would suggest that in all cases of obscure systemic derangement a thorough examination of the oral cavity be made by a competent dentist and radiographs taken of every tooth.

Do not take patient's word for the condition of their teeth and mouth.

Many teeth are extracted having opical abscesses from which the patient has experienced no local inconvenience.

More attention should be paid to physical diagnosis and bacteriology by the dentist and a hearty co-operation of the medical and dental professions.

This is the day of preventive medicine and we can only render our patients the proper service when we are able to recognize and properly treat local conditions that may cause a systematic derangement, not waiting until the damage has been done and then look for a remedy.

By our united efforts only can this result be accomplished.

REPORT OF CASES.

(Cases of Dr. E. C. Hume, Radiologist).

1. Patient, lady, age 37. Referred by her family physician for X-ray examination of teeth as a possible cause of rheumatism in left ankle. Teeth were apparently in good condition. 1st and 2nd lower left molars show behind abscesses; teeth were removed and six weeks later patient said she did not suffer with ankle any more. During this time the

only treatment was a tonic of iron, quinine and strychnine.

2. Patient, man, age 57. Referred for X-ray examination of teeth, suffering with pain in right side of face and sight in right eye practically gone, due to atrophy, so a specialist said. Radiograph shows abscess on right cuspid, second bicuspid and molars. The teeth were removed, pain ceased but sight did not improve.

3. Patient, man, age 42. Referred for X-ray examination of teeth as possible cause of periodical headache and rise of temperature of from one to three degrees. Both superior centrals were abscessed so much as to involve all the upper anterior teeth. After removal and treatment, patient says he feels like a new man.

4. Patient, young man, age 22. Had lower right molar prepared for crown about one year before I saw him. Complained of his neck and face. Radiograph shows molars abscessed and root fillings extending through side of root. The tooth was removed. He has had no further trouble.

5. Patient, lady, age 31. Suffering from dull pain in right side of face and general tired feeling all the time. X-ray shows bicuspids and molars abscessed. These teeth were removed and pain ceased. General condition improved.

6. Patient, railroad flagman, age 33. Had been suffering several years from what he termed neuralgia. Radiograph shows wisdom tooth unerupted and abscessed. Also the upper teeth to which bridge was attached. Abscessed teeth were removed and he told me he never missed a day from work last winter, a very unusual thing as he often had lain off in the winter months. The teeth were removed April 13th, 1914.

(Cases of Dr. Yager).

7. Mr. G., chronic sore throat and periodic attack of tonsillitis. Radiograph shows pus pockets under crown of impacted lower right wisdom. Teeth removed and condition entirely relieved.

8. Mrs. F., suffered from continual pains below left alae of nose with occasional attacks of severe headache. Radiograph shows blind abscess on left superior central with the apex necrosed. Complete cessation of pain after its removal.

9. Mrs. H., general condition bad. Pains in wrists, ankles and at times, severe headaches accompanied with a general derangement of the stomach and nervous system.

Examination of mouth showed eleven teeth effected with pyorrhea in such condition as to warrant their removal.

Report from patient ten days later showed a decided improvement in general condition

and at last reports was better than she had been for a number of years.

10. Mrs. M., has been running a temperature from one to three degrees daily for three years, pain in right side of face effecting the eye; this pain being so severe at times as to necessitate the service of a physician to relieve her. Antrum examined, also glasses fitted as well as a general examination to find if possible the source of infection. No relief.

On account of accident to right superior second bicuspid, the root was removed which proved to have been abscessed. This patient presented five weeks later and volunteered the information that all pains in her head had left and that her temperature had been normal for ten days or two weeks.

11. Boy five years of age. Badly abscessed lower right and left temporal molars with glandular involvement on both sides; running a temperature, loss of appetite and very restless at night. Normal condition restored after removal of the affected teeth.

12. Dr. M. Pains in finger joints of right hand. Radiograph shows blind abscess on root of lower right 2nd molar. Condition relieved after removal of tooth.

13. The following case I have had under observation for six weeks at this writing.

Mrs. E., a neurasthenic hypochondriac and general kicker, suffering from all sorts of pains and aches, more especially facial and in the joints of both hands.

An examination found several of the superior teeth in such condition that their removal was indicated. Radiographs were taken which showed abscessed central and lateral also bicuspids on both sides. On the morning the teeth were extracted, twelve in number, I made the following data:

July 1st—	
Blood pressure	160
Temperature	99 2-5
Respiration	24
July 27th—	
Blood pressure	140
Temperature	99
Pulse	66
Respiration	26

The record of blood pressure and pulse shows the presence of pus and the changes on its elimination

There has been quite a change in the appearance of patient from a partly sallow complexion to a clear healthy color and red lips.

The pains are somewhat diminished according to her own report.

I still have the patient under observation but in a case of this class it is hard to get the real results obtained.

DISCUSSION.

M. L. Ravitch, Louisville. While general practitioners are very well acquainted with the importance of the teeth in relation to the general condition of patients, I would like to call your attention to the fact that the teeth have relationship to dermic disturbances. Many a case of localized erythema or eczema have been cured by correcting diseased teeth. I have met with some cases with persistent angio-neurotic oedema due to pyorrhea.

A very peculiar case came under my observation about nine years ago, which was also seen by Dr. Yager. The case was exhibited by me before the Jefferson County Medical Society, and was considered one of cancer of the cheek in a young man, 26 years of age. Some of the best surgeons in Louisville saw this case and believed it was cancer of the cheek. Taking in consideration the age of the patient and the rapid growth of the ulcer, I could not believe it was a cancer. A bacteriological examination was made in this city and in Chicago, and the reports from both laboratories showed that there was an excessive proliferation of cells, and the diagnosis of cancer was substantiated. Since the ulcerative process could be traced back to the upper jaw, I found the patient had trouble with an upper molar. I took him to Dr. Yager, who examined him, and found a large abscess in the upper molar. He recommended extraction of the tooth, which was done, and under the use of mild antiseptics the supposed cancer healed rapidly and left only a slight scar.

When we encounter such cases as this, it is very essential to go into details and make a thorough diagnosis of every suspicious case if we want to get results.

The subject of focal infections is important, and physicians ought to pay more attention to it.

W. W. Anderson, Newport: I would like to ask Dr. Yager whether in the presence of focal infection, which he has illustrated, the tooth or teeth are not found to be tender to touch in many cases, or how would he guess there is an abscess there?

John J. Moren, Louisville: One of the pictures you have seen is a picture of my mouth: I began to suffer pain in my joints and especially my hands, so that shaking hands was absolutely painful to me. I had a lower molar tooth that was hurting me a good deal. I wanted my dentist to look at it with a view to extracting it, but he refused to do so because he wanted to save the tooth. I had heard a good deal about focal infection and decided to take the initiative myself. Dr. Keith made an X-ray picture which showed an abscess on two roots. It was a crowned tooth; the dentist removed the crown, and found the tooth in bad condition. Dr. Yager removed the tooth, and within a short time, I will say within two weeks time, I had practically no

pain. I did not take any medicine. I did it purposely to see if it had any influence. To-day Dr. Yager asked if I could shake hands. He grasped my hand firmly without any pain being experienced on my part. That tooth was very painful to the touch, and in chewing, if I caught the food at a different angle, pressed it outward or inward, the tooth, which was rather loose, would be very painful. I could not chew on that side any more. So I am firmly convinced that this tooth had something to do with my pains. I have had none since, and I have not used any medicine.

One thing more about teeth. For two or three years I have had a number of children come to me with twitching of the face, so-called habit spasm, that had resisted all medication, tonics, sedatives, and so on, but which were relieved by extracting teeth that were decayed. I have referred two or three cases to Dr. Yager for treatment, and he himself has noticed that by getting rid of the local infection or irritation the spasms ceased.

M. Casper, Louisville: I think the program committee should be congratulated on having had this subject presented so well. Radiographers find a surprising number of unerupted teeth. There was a time when we thought unerupted teeth were a rare occurrence, but now we know they are by no means rare, but rather a common thing for patients to have unerupted teeth. A great many of the facial neuralgias and headaches, especially lateral headaches, are explained by unerupted teeth which are not discovered until radiography is resorted to. In the case of an abscess of the root of a tooth, that particular tooth feels to the patient longer than the rest of them. The patient will always give the symptom, or nearly always, "it feels a little longer than the rest of the teeth, and it is more sensitive." Radiography will readily diagnose an abscess of the root or several abscesses as case may be.

Doctors and dentists should get together more on this subject than they have in the past. A great many systemic conditions are due to these focal infections, and it has been brought out clearly in a recent meeting of the American Medical Association at San Francisco through its splendid exhibition, showing the relation of focal infections, and also demonstrating very graphically the cause of those conditions as due to a specific organism. I forget the exact name, but I think it is *amoeba buccalis*. I saw the organism under the microscope at San Francisco. It is easy to isolate, and its bearing upon systemic conditions generally is really a large field which will be rapidly opened up in the near future, so let dentists and doctors get closer together and work out these problems.

C. E. Furcell, Paducah: Generally speaking, I think the conditions the doctor has brought out

in his paper have been neglected, and I think the reason they have been neglected is, first, that while there has been an attempt on the part of dentists and internists to show the importance of these focal infections, it has been a hard matter to get physicians and specialists to see the full importance of it. I might relate two cases that will not only show the importance of the subject, but it will also show the value of treatment, and the prompt cure when the right treatment is instituted.

I recall having seen a few years ago a young lady who had intolerable pain over the side of the face, and her condition had been diagnosed as *tic douloureux* and she had been advised to have the ganglion resected. It was at a clinic where some of the most famous surgeons in the United States were in attendance. Antral disease had been excluded. The diagnosis had already been made of *tic douloureux*, and the surgeon was going to remove the Gasserian ganglion, but for some reason or other, his time was so taken up that he did not get to this case, and the girl was dismissed from the hospital. She went home; her physician extracted a molar tooth, and she got well. She did not need any other operation.

The second case was a man who had intolerable pain in his canine tooth. He went to his dentist, and the dentist unfortunately broke the tooth and left a part of the root in. The case came under my observation. Whether it had any connection with the antrum or not I did not then know, but the patient had intolerable pain all over the side of the face. He suffered so much pain his physician gave him morphine to keep him quiet, and even morphine did not quiet him. Transillumination was practiced which with other evidence was positive. He had a molar that was loose, and the peculiar thing about it was the patient did not think there was anything wrong with the antrum. His doctor did not think he had any trouble with his antrum, and I had not only the patient to convince but also his physician. But the indications that he had trouble with his antrum, were positive, and I suggested and urged that he would make no mistake by having the tooth removed, and if there was a diseased condition of the roots a puncture of the antrum could be immediately done, and it would not only establish the diagnosis, but if the trouble was there, it would quite likely cure it: it would give sufficient evidence that would lead to a cure. The tooth was removed, and an abscess was found at the roots of the tooth; the antrum was washed out, and the patient got well immediately and has remained so.

In the future, not only specialists, but physicians generally, must pay more attention to searching out these focal infections. We must not be content to pass on a case by merely looking into the nose and mouth. We must come more to rely

on team work and complete and exhaustive examinations.

O. O. Miller, Louisville: One of the distressing complications in pulmonary tuberculosis is a mixed infection developing some time during the course of the disease.

Not infrequently this secondary infection finds its origin in diseased conditions existing in the mouth.

One of the best prophylactics is strict oral hygiene. All decayed teeth and suppurating conditions about the gums should receive appropriate treatment. If this be done one can expect better results with the treatment; there will be less gastro-intestinal disturbance and less likelihood of secondary infections.

N. T. Yager, (Closing): I do not believe I clearly understand the question of Dr. Anderson.

W. W. Anderson: I asked the question as to what evidences there are of focal infection or apical abscess without the use of the X-ray, whether the tooth is not tender at times, which would lead us to suspect that is the focus.

N. T. Yager: No, the tooth is not necessarily tender. I tried to bring that out in my paper. Many apical abscesses exist for an indefinite period without any local manifestations. There may be a cavity that should be filled, and in attempting to fill it you may find that the tooth should be extracted, which would show up the abscess. Unless you take an X-ray picture there is no way you can find out.

Another thing: I have observed that where a tooth is sore, and abscessed, it is not of sufficient duration to give the patient much systemic derangement, because it is usually attended to at the time. The infections that play the most important part with the general condition of the patient, are the blind abscesses from which the patient, as far as you are able to learn, suffered no local inconvenience.

I thank you for the discussion and the courtesy shown.

Clinical Forms of Whooping Cough.—Shipovich reports four cases of whooping cough with unusual clinical manifestations. In one there were acute emphysema of the lungs, emphysema of the entire skin of the body, head and extremities and pneumothorax, the case terminating fatally from rupture of some alveoli in the lungs. In the second case the attacks of coughing were followed by unconsciousness; necropsy showed hemorrhagic encephalitis and pulmonary edema. In the third case the unconsciousness, clonic convulsions and glycosuria were probably caused by capillary hemorrhage in the fourth ventricle. The glycosuria disappeared afterward, and the patient recovered. In the fourth case, bloody tears showed during the cough. They contained numerous lymphocytes. This child also recovered.

COMPLICATIONS OF MIDDLE EAR SUPPURATION.*

By L. S. GIVENS, Cynthiana.

When our worthy President assigned me the foregoing subject as selected by the committee, I felt sure that there would be a companion paper—taking up the symptomatology, prognosis, treatment, etc., which in itself, would require additional volumes for reference, but lo, when the program appeared printed in the JOURNAL I gave it “the once over” which glimpsed me at once that I was the only one, the *ne plus ultra*, the *sic semper Maginnis*, or, as Marse Henry Watterson would say—words to that everlasting bloomin’ effect.

So I shall endeavor to briefly mention in a general way some of the most frequently met with complications in middle ear suppuration.

The presence of pus in any locality depends upon a necrotic process involving the deeper tissues of the region.

In the middle ear the upper portion of the tympanic cavity presents an exceedingly favorable site for the development of a purulent inflammation, since in this region considerable connective tissue is present, forming the framework of the mucous duplications of the tympanic vault as well as of the ligamentous bands fixing the ossicles to the walls of the tympanum and uniting them to each other.

There is no small individual cavity in the human body which occupies so distinctly vital a position in its relations to surrounding areas as does the *cavum tympanum*.

Therefore a study of its anatomical relations will definitely reveal the close interrelation which exists between the *cavum* and its many accessory areas, viz. the Eustachian tube, the mastoid antrum, the lateral sinus, the carotid canal, the labyrinth and the temporo-sphenoidal fossa.

Suppurative otitis media is simply a generic classification of the varieties of pus producers which may invade the middle ear cavity. On the virulence or activity of the specific coccus or bacillus responsible for this suppurative process will depend the frequency, severity and rapidity of extension of such an active destructive process into the surrounding vital intra-cranial tissues.

Involvement of the mastoid process is almost always secondary to an acute or chronic suppurative middle ear condition by extension backward to the mastoid antrum from the middle ear cavity, through the additum ad antrum. The antrum is then the first portion involved, subsequent infection spreading from this cell as a center. Such infection will fol-

low the course of least resistance. If purely inflammatory in character it follows the mucous lining of the mastoid cells until subsequently the entire mucous surface is involved.

With the further infection suppuration begins, pus collects within the areas involved and tension results, thus hastening the process.

In examining a temporal bone we find that the mastoid portion has relations with both the middle and posterior cerebral fossae; that in the posterior fossa it is in intimate relation with the sigmoid sinus. So we draw our conclusions as to what can and what does often happen.

In the acute diseases of the middle ear cavity which may lead to brain abscesses the two most vulnerable spots by which infectious matter may enter the brain tissue or its membranes directly are the tegmen tympani or tegmen antri, by erosions or through dehiscences.

Internal ear complications resulting from middle ear suppuration has been much written about and discussed. Labyrinthitis in connection with acute otitis media (and Gerke, for example, puts acute suppuration of the labyrinth and acute exacerbations of chronic suppuration in the same category) is usually the avenue to a fatal meningitis in those cases in which death occurs a few days after the beginning of the suppurative process.

Secondary involvement of the labyrinth is seldom met with in chronic suppuration. When present, the mischief has usually been done in the acute stage of the disease, and although both the oval and the round window may have remained bathed in pus for years, extension to the labyrinth seldom follows.

The frequency with which purulent involvement of the brain substances follows acute or suppurative otitis media, was made interesting in a report of “A study of twenty-one such cases coming under the personal observation of Dr. Edward B. Dench” a few years ago.

In four of the twenty-one cases the duration of the suppuration was unknown, in seven there was a history of chronic suppuration, while in ten, intra-cranial involvement followed an acute suppuration of the middle ear.

I know that later day statistics vary to a great degree from the teachings on this subject of old time instructors. A number of years ago, I was a student in London’s best throat and ear hospitals, namely the Central London with Lenox-Browne and Dundas Grant, and the Golden Square with Sir Morrell McKenzie and Mark Hovell. The latter (Mr. Hovell) remarked more than once that “acute suppuration of the middle ear was comparatively seldom followed by cranial

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

complications; the reason, the lymphatics are intact, and any septic matters which might find their way into the cavity are probably destroyed.

Psychical disorders of various kinds and epileptiform convulsions are sometimes due to chronic middle ear suppuration; obstinate cough and frequent sneezing have been observed to accompany a chronic discharge from the ear.

Complications in the heart, pleura, joints and kidneys coexist with startling frequency. There is no doubt that a certain degree of phlebitis in connection with purulent ear disease, leading to thickening of the coats of the vessels and to thrombi, especially in the sigmoid sinus, sometimes exists.

So long as the thrombus is firm and solid, obstructing the circulation, the danger of general blood infection is not as a rule great; but when it becomes infected, soft and disintegrated, the broken down and septic thrombi are detached by the current of blood and become emboli in some near or remote part of the body, giving rise to fresh septic centers.

In this way septic thrombi, swept on by the circulation, give rise to infarctions and metastatic abscess, especially in the lungs.

The lungs, liver, spleen, joints or subcutaneous connective tissue may, however, be the seat of such infective abscess formations. Thus the general mass of the blood may be infected, causing pyemia or septicemia. Indeed, this is probably a much more frequent complication of ear disease than is usually supposed.

The position of the tonsil is well established in this respect, and we know it is frequently the source of infection in other organs. Then, why not a discharging middle ear trouble?

Complications threatening the life of the patient may arise at any time in the course of middle ear suppuration, and this should always be borne in mind, in spite of the fact that a large number of patients suffering from this disease never present any serious symptoms.

I have quoted from articles along this line in Transactions of Laryngology and Otology sections of our A. M. A., also Transactions of American Laryngological, Rhinological and Otological Society, and from other authorities whose opinions have borne out my own personal observations in the care of these cases during the past twenty-eight years.

DISCUSSION.

Wm. J. Thomasson, Newport: I want to congratulate the doctor on his paper. I do not want to take up the question of complications of middle ear infections, but would like to say just a word on the prevention of this trouble.

We know that ninety-five per cent. of all mid-

dle ear troubles originate in the throat or nose. Furthermore, we know that this trouble extends from the throat or nose through the Eustachian tube. Where we have a pathological condition within the Eustachian tube we have an increased blood supply in the middle ear. From the middle ear it is only a step to the antrum, and only a short step from the antrum to the mastoid cells. When the mastoid cells are involved you may not only have abscess in the brain but have the lateral sinus denuded, and your patient dies before you think he is seriously ill. It is up to the man who sees the case first to try and stop the invasion or spread of the trouble from the throat to the middle ear. If you are not capable of distinguishing a change within the ear drum, get your head mirror, practice upon your coachman; if you cannot practice upon him, practice upon your wife; but above all things, learn to distinguish the first symptom of middle ear infection. When the border of the ear drum is red, when you have a bulging, an incision from top to bottom of the drum head will give good drainage and possibly prevent the patient from having mastoiditis. You will have relieved the patient not only from great pain, but saved him from having a mastoid complication. I do not believe the middle ear can be infected without having an infection of the antrum, and whenever you have infection of the antrum itself, the cells in the mastoid are affected. In the future, we should not let a child suffer pain due to middle ear infection for the drum head must be incised and free drainage established.

B. A. Bledsoe, Newport: I want to repeat a couple of paragraphs that were in Dr. Givens' paper which are very important. One is, "there is no small individual cavity in the human body which occupies so distinctly a vital position in its relations to the surrounding areas as does the *cavum tympani*." Another one is, "the presence of pus in any locality depends upon a necrotic process involving the deeper tissues of the region."

Given a middle ear abscess that has ruptured or has been perforated instrumentally, you must always consider and keep in your mind's eye the fact that there is destruction going on beyond the area upon which you look. In a chronic otitis media, with a large perforation in the drum, a large abscess going through the perforation, you only see a small portion of the necrotic area. The destruction is going on in the entire middle ear, possibly back into the mastoid antrum, the mastoid cells. You must remember this that unless tension is increased in the mastoid cells you are not going to have marked symptoms of mastoiditis. With the symptoms of acute mastoiditis you are all familiar, but in the chronic cases, where drainage is free, you may have a mastoid inflammation as a result of a slight cold, producing an exacerbation, or it may go on to one, and

I consider the most important complication with which the doctor has to deal is brain abscess. Brain abscess is undoubtedly the most important complication of middle ear abscess. I would like to speak one word in regard to them, and then I will have finished. Brain abscess is very treacherous. I have seen a few cases—I won't say how many, but there is one I might refer to in particular, and possibly it may enlighten you more than an array of words.

I saw this case one day with a moderately free discharge from the ear; the temperature varied from 99 to 100, the patient complaining of severe pain in the frontal region, but of none whatever in the mastoid region, nor anywhere else except in the frontal region which, upon transillumination, was shown to be negative. In twenty-four hours that young man was a corpse. Upon post-mortem we found that the tegmen had been ruptured and a small brain abscess existed.

Given any case of middle ear suppuration in the acute stage, or a mastoid irritation, it is your duty, either as a specialist or general practitioner, to immediately see that there is free drainage furnished that middle ear. That is of first importance. Furnish free drainage and keep it free until the trouble has been eliminated. One paracentesis is not sufficient in the vast majority of cases. Your duty is only finished when you are satisfied you have free drainage down to the floor of the canal. That is one thing I would like to impress upon you all.

W. B. McClure, Lexington: Just one word. I take it for granted that the one thing the otologist fears in a suppuration of the middle ear, and the one thing on which he looks with greatest anxiety is a possible mastoid involvement. "An ounce of prevention is worth a pound of cure."

I want to emphasize the statement made by Dr. Thomasson that the remedy to prevent this condition is free drainage by opening the tympanum. With a good light, I think the general practitioner might very readily, and with a proper instrument, establish drainage, and in a very large per cent. of the cases the other extensions following mastoid involvement may be thus prevented. I believe in every case, where you have a bulging ear drum, red, if you will make an incision and let out the contents of the middle ear, you not only relieve pain and establish external drainage, but you save those complications which we so much dread.

J. F. Reynolds, Mt. Sterling: My compliments to Dr. Givens for this excellent paper. It is not only of interest to the Otologist but equally so to the general practitioner and surgeon. No doubt you have all diagnosed abscesses in the liver, spleen, kidney, lung, appendix and various other organs without being able to tell the origin of this septic material.

Have any of you ever asked these patients if

they suffered from middle ear suppuration? If we find an abscess in any part of the system and cannot find the cause elsewhere make an examination for suppuration of the middle ear.

I want to call attention to a few of the most frequent complications which Dr. Givens has failed to mention, namely, constriction or stenosis of the Eustachian tubes, atrophy of the mucus membrane of the naso-pharynx, ptosis of the eyelids, divergent squint, unsteadiness of gait, aural-polypi, facial paralysis and perichondritis of the auricle.

Pomeroy mentions a case of peritonitis with sub-mucous ecchymoses in the intestines at an autopsy after a fatal ear disease.

In my opinion if the members of this society will study carefully Dr. Givens' paper, they will unanimously agree it has been one of the most important papers that has been read at this meeting.

L. S. Givens, (Closing): I feel very grateful for the able discussion of my paper and for some valuable points so clearly brought out, and will add a few words only as to the prevention of nearly all of these complications.

The sooner we make a diagnosis of middle ear conditions, the better will be the prognosis. That is an old time saying.

In a paper read before this society a few years ago in a symposium on the treatment of acute mastoiditis, etc., I remember laying great stress on the prevention of mastoid trouble in the treatment of middle ear complications. Of course, all middle ear diseases will be, more or less, mastoid complications, but with thorough opening of the tympanum and establishing free drainage, a clean cut cavity made, there will be less complications of mastoid conditions, which, of course, predominate in these middle ear complications. In the meantime the adenoids should be removed and the tonsils, if diseased, taken out. There should be a good draft made through the respiratory passages, so that the child can breathe, talk, sing and whistle, and eat in god shape. Free from obstruction in the upper respiratory tract, the child will have fewer colds and troubles from acute infections of the tubes and middle ear complications will be less.

I remember a discussion Dr. Wendell Phillips, of New York, made before the medical section at the meeting in San Francisco, when he said he believed it was his impression that in the Manhattan eye and ear and throat hospital, and the postgraduate, those cases brought to the hospital with middle ear complications were put to bed and proper drainage established, and careful modern treatment instituted, many of them were taken through without any particular operation.

THE HEAD COLD; PARTS INVOLVED, AND SOME OF THE RESULTS.*

By C. A. Moss, Williamsburg.

The head cold needs no introduction to most of us, as it is an old and intimate acquaintance which we usually call catarrh, a kind of blanket name which we use to cover the multitude of affections of nose and throat and while the throat is not a part of my subject, it is so closely associated with a cold in the head that I shall make mention of it in the course of my paper.

The parts involved are, inferior turbinates, middle turbinates, frontal sinus, anterior and posterior ethmoidal cells, sphenoid sinus, maxillary sinus, deflected septum, and nasopharynx, and while I do not profess to be anything but a general practitioner, I will endeavor to give an idea of parts involved and some of my results.

First, the inferior turbinates frequently become hypertrophied, especially the posterior tip, and patient complains of nose giving difficulty in breathing and catching cold easy, and sleeping with mouth open when having a slight cold, sometimes sprays and local applications will give relief, but it is generally only temporary, and when these things do not give relief, the removal of posterior tip with snare (and that is not as easy as it sounds) will give patient permanent relief and sometimes in addition it is necessary to cauterize or remove a small amount of lower border with scissors.

The middle turbinate lies over the openings of frontal sinus, anterior ethmoid cells and maxillary sinus, and when it becomes enlarged, according to degree there is partial or complete loss of drainage from these cavities, and this gives rise to symptoms of from a slight full feeling to a very acute pain, and these pains are often diagnosed as eyestrain, neuralgia or sun pains. Removal of the middle turbinates provides drainage and gives patient relief if case is not of too long standing. it would seem from following case that even long standing has no effect on good results.

Man, age forty-five, history catarrh and severe frontal headache for two years, in this time bone had decayed and perforated and he had a lump half the size of a hen egg at upper and inner corner of eye. I lanced through skin and a quantity of very foul-smelling pus escaped. I kept this place open till discharge had practically ceased, and then removed his middle turbinate, opening on outside was then closed up. this was two years ago and patient has had no further trouble.

Another interesting case was that of a young lady with severe headache in left frontal region, she was unable to breathe any through left side of nose. I first removed the middle turbinate and about fourteen days later I did a second operation. I found a growth completely filling posterior nares and adherent on all sides, I took an elevator and separated the growth all the way around and then as I thought removed it all, several days afterward the patient returned and said she still had difficulty in breathing through her nose. I reexamined her and found another growth which I removed, it is the smaller of the two specimens shown in the bottle, and it is in realty part of the growth that I missed before, as you see growth removed at first operation is large enough that it does not look like there would be room for anything else, in fact it was so large that I could not bring it forward through nares but had to push it back into the throat, and patient expelled it through her mouth, in this case the after-results were very satisfactory, patient was relieved from headaches and colds, gained about fifteen pounds in weight. I find that most patients relieved of chronic cold in the head make considerable gain in weight, one gaining thirty pounds, the above-mentioned case also had some inflammation of middle ear and this also disappeared.

Another case came to me with intense pain under right eye which had been diagnosed as neuralgia, I examined nose and found enlarged middle turbinate. I contracted it with cocaine and this promptly relieved trouble by giving drainage to the maxillary sinus, this patient had no more trouble, likely because his trouble was acute and brought about by exposure, and while speaking of dilatation of nose with cocaine, I wish to emphasize the necessity of a thorough dilatation of nose when making an examination, because in many cases it is impossible to tell exact condition without this. And in conclusion, on the frontal and maxillary sinuses and the anterior ethmoid cells will say that I have not had any cases so severe that removal of the middle turbinate would not relieve the trouble, and while I find that in some cases one sinus is involved worse than the others, I find when one is involved that there is more or less involvement of the others.

In speaking of posterior ethmoid cells and sphenoid sinns, I make the diagnosis by pus coming from above middle turbinate and covering posterior wall of naso-pharynx, it is practically impossible to get at or see the sphenoidal sinns without the middle turbinate has previously been removed, and I have had but one patient whose symptoms from inflammations of these sinuses were severe, he

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also had severe involvement of frontal sinus, I removed middle turbinate relieving his frontal headache but occipital headache continued till I put him on a spray of fresh silver nitrate solution, four grains to the ounce and this in a short time gave him relief.

Deflected septums are frequently the source and main cause of colds in the head, and they as a rule press against one of the middle turbinates and stop drainage from sinuses opening under it, and in this class of cases submucous resection will, as a rule, give patient relief.

The naso-pharynx gains importance under the subject of colds in the head from the fact that the openings of the Eustachian tubes are here and that a great many cases of middle ear trouble and the partial or complete deafness that sometimes result, originally started from infection introduced into the Eustachian tubes from a cold in the head. Also the naso-pharynx in children often is full of adenoids, and the removal of adenoids is, as far as results are concerned, all that could be asked, a child will stop having a cold all the time, breathes through its nose, is brighter in school, gains in weight, and parents will say child does not look like same child.

One word in closing on vaccines. My experience has been very limited with them. The influenza bacterin for cure and prophylaxis of colds while not recommended to remove middle turbinates and correct deflected septums, I have been unable to get any results from it in any class of cases, however, in a case of acute inflammation of the throat and soft palate, so swollen that patient could not swallow, patient suffering severe pain, temperature 102 1-2, patient coughing and spitting a very tough, tenacious phlegm, no sleep in 48 hours, I gave 20 c.c. antistreptococcic serum subcutaneously one evening and next morning patient was so much improved that he was practically well.

DISCUSSION.

Isaac Lederman, Louisville: The doctor in selecting the title of his paper has, I think, chosen wisely because the term "cold in the head" is one that the public have assumed to be of very minor importance, and which may under certain conditions and certain circumstances, as we all know, assume very serious proportions.

The doctor has also dwelt upon the condition of the middle turbinates and upon the sinuses, and in the short time at my disposal I wish to emphasize this point only. First of all, that in practically all severe cases of acute rhinitis, so-called "cold in the head," there is involvement of the sinuses. There is involvement of the frontal sinus in the form of frontal sinusitis in a great number of cases, and there is certainly congestion in the antrum of Highmore in a great

many more. One attack of acute rhinitis does not amount to anything as a rule. We know that it has a tendency to recover; that with or without treatment it will be relieved in a few days provided the patient's general condition and surroundings are good and the cause of the original infection has been removed. However, in a nose that has been deformed, one in which there are already hypertrophied turbinates, or in which there is a deviated septum, we are likely to get a chronic condition. We are very likely in cases of this kind to have as a sequel of our acute rhinitis probably an abscess of the antrum which may be symptomless for a while until it is lighted up again by an acute infection, or we may have ethmoid or frontal sinus disease which may bring on future trouble. The subject of sinus disease is an important one.

Next to this is the point the doctor brought out: that in all case of acute rhinitis we must look to the naso-pharynx for direct extension, and we usually have inflammation of the nasopharyngeal mucous membrane. The location of the Eustachian tubes gives us direct communication with the middle ear. Acute rhinitis or "cold in the head," so far as the disease itself is concerned, is of no particular importance except as being the cause of complications which may be serious. It is for this reason worthy of our efforts to lessen its severity and shorten its course.

S. G. Dabney, Louisville: I have enjoyed the paper of Dr. Moss very much. I think he has chosen a very attractive subject and has clearly presented it in a practical way. He has shown how little ordinarily can be expected from the use of sprays; that they do little more than act as cleansing agents in the chronic cases. If I should make my choice of nasal operations as the one most often useful I would take resection of the anterior portion of the middle turbinate bone. I have seen reflex symptoms about the eye and face relieved in that way, and it helps to promote drainage from the sinuses. It frequently gives us knowledge of the underlying cause which we would not previously have, namely, the existence of polypus or ethmoid disease.

I want to congratulate the doctor on his excellent paper and to say that I have enjoyed it very much.

President Kincaid, Catlettsburg: Will someone be good enough to tell us what his success has been in the treatment of common colds with vaccines. We have one specialist, not far away from where I live, who is said to be curing a wonderful lot of cases with vaccines. I would like to hear the experience of any member in regard to the use of these vaccines.

If there is no further discussion, I will ask Dr. Moss to close.

C. A. Moss, (Closing): I wish to thank the gentlemen for their discussions, and I will not burden you with any further remarks.

THE DISEASED TONSILS, WHAT SHALL WE DO WITH THEM?*

By C. E. PURCELL, Paducah.

To the average physician, no doubt, the question here asked would appear very easy to answer. In fact, each one has already answered it to, at least, his own personal satisfaction. But have we answered it correctly? Have we had enough experience with the progress and evolution of tonsil surgery in its rapid advance during the last ten years to say what is productive of the most accurate diagnosis of tonsillar disease, what is the best line of procedure, operative or otherwise; and finally, what is the safe position for us to assume toward the subject to entitle us to the confidence and respect of the whole profession? There was a time when laryngologists were considered an army of swobbers and sprayers, whose opinions carried little prestige with scientific men. Fortunately, that day is past. There was a time when each one could have told, with recognized authority, that all it was necessary to do was to clip off part of each tonsil with most any instrument, and the patient would become and remain permanently well. This was advised and practiced for many years. Then we had our advocates of the complete removal of tonsils, many men adding new technique and new instruments. This too, all appeared quite logical and in keeping with progressive surgery. It was argued that if the tonsils were diseased, that the whole should be removed and not a part. It was further urged that it was imperative that the operation go beyond the capsule—in other words, the tonsils should be extra-capsular tonsilleotomized.

It might be of more than passing interest to inquire why the committee on program should, from year to year, keep this question before the profession. It seems to be not only a current but a recurrent question. Those of us who do this work and see the results, for good or otherwise, know it is not only a live subject, but that there are many points unsettled and that we are working along many lines for an agreement of the solution, for we must address ourselves to the unsettled question in medicine and surgery if we are to keep up with the advance of progression. Settled scientific facts need no comment and no discussion.

Unfortunately for us, the science of medicine and diagnosis have not reached that point where we can, in every case, say what are diseased tonsils and what are not. The successful and correct diagnosis of tonsillar disease is as essential to treatment and cure of this

disease as is the diagnosis of any other trouble. Medical men, I mean scientific medical men, have from the earliest times urged the importance and necessity of correct diagnosis. Every medical man must stand on his ability to make correct diagnoses and every treatment—medical or surgical—must be based upon the knowledge of what is wrong. The dignified specialty of laryngology is not for those having the vision of Cyclops—one eyed. It is not for those who see and remove tonsils from every throat regardless of what other diseased conditions there may be in the upper air passage that may be, and no doubt are, causing all the symptoms which lead the patient to seek medical relief. Who of you would advise and operate on tonsils of one far advanced with pulmonary tuberculosis or one afflicted with tubercular laryngitis? Who of you would attempt the removal of tonsils in cases of diseases of the sinuses—pus in the frontal maxillary, ethmoid or sphenoid sinuses? Shall we operate if there be hypertrophy of the tonsils or cryptic degeneration with symptoms of systemic focal infection and absorption? Have we cooperated sufficiently with the dentist and have we given sufficient attention to the alveolar process and the possible pathologic conditions associated with it, to justify our position of complete investigation when we have given our decision to operate? Many pains in the head and throat are caused by carious teeth, as well as the alveolar process.

And again, who of you would operate for tonsillar disease caused by systemic infection from tuberculosis and syphilis? Imagine the plight of one who had removed an enlarged tonsil not keeping in mind its possible malignant nature and who had not made use of the proper diagnostic measures and who had not given a guarded prognosis. And, finally, who of you would diagnose diseased tonsils and advise removal in case of enforced mouth breathing due to various causes and especially those due to hypertrophied turbinates and deviated nasal septa? These mouth-breathers have, practically all of them, chronic trouble with the throat and especially the tonsils appear to be chronically diseased.

Do you think it reflects any credit on our profession to attack, surgically, such tonsils? And yet, we see this practiced with great frequency. Would it not be better to put aside some of this zeal and attack the causes of tonsillar disease, if it is possible to do so with discretion? The harmful effects of mouth breathing on the upper air passages is not recognized, much less emphasized, by every physician. We all know that most frequently the establishing or re-establishing of sufficient

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nasal respiration does away with all symptoms of throat trouble.

It is not intended in this article to point out what are and what are not diseased conditions of the tonsils. That has been fully covered in the text books and in many able articles by men everywhere. It is intended to call attention to the question in the title of the paper assigned me "What Shall We Do With Them," and it is also intended as a note of warning against the too frequent and especially the overzealous radical operations that are constantly being performed. Because there has been so much written, and especially by the lay press, about the harmful effects produced upon the child, both physically and mentally, by the presence of adenoids and tonsils, parents and their friends frequently make their own diagnosis without the advice of the laryngologist. Parents should be advised to accept with great caution all that is said or written about the subject, for should we heed all of this, every child should be operated upon or become a physical, moral or mental degenerate. Understand, I do not attempt to minimize the importance of the tonsil question or the urgency or advisability of their removal when their presence is a menace to the physical or mental development of the individual. Your own experience must guide you in this direction. Because every child five and six years old has some enlargement of the tonsils does not justify the position that every child should be operated upon. The fact that a child is a habitual mouth-breather does not justify a diagnosis of enlarged tonsils and adenoids.

At the present time, the discussion of this question, without taking into consideration the possibilities of injury to the patient's voice, if tonsillar surgery be contemplated, would be very incomplete. The lymphoid tissue found in other parts of the body is similar to that of the upper air passages, though there are characteristically structural differences. Some of the most important vocal organs are in close proximity to this tissue and since this tissue varies so much during the individual's life, it is difficult to say just when it ceases to be normal and becomes abnormal and, hence normal conditions are often mistaken for diseased ones and are so treated. The voice is very necessary to physical and mental development and all surgery that ultimately injures the voice must be condemned unless such surgery be undertaken in an effort to save or conserve life. As has been pointed out, there are three different ways in which the lymphoid tissue of the upper air passages may affect the voice and have marked bearing on its development; First, its use in lubricating the pharynx; Second, its use upon the action of

the muscles employed in phonation; Third, its effect upon the resonant chambers of the voice. Therefore, in its normal condition it is an aid to the voice; but in its abnormal condition it is harmful to the voice. Now, have all the operations in the hands of all operators been free from damage to the surrounding structures? Like the observations of other men, I have also seen, in the last few years, various mutilations of the pharynx caused by the so-called tonsilleotomies. Before our local society I have called attention to these mutilations, injury to the pharyngeal muscles, amputation of the uvula and irreparable injury to the soft palate, not only from cutting it unnecessarily, but by stripping the mucous membrane from it. This results from the incomplete and faulty separation of the tonsil from the pillars. Operations for the removal of tonsils and adenoids should not be looked upon as a simple procedure, as so regarded by some; but should have the same thought and care as any other major surgical operation. I have seen, as most of you, many damaged throats which would otherwise have been better had they never been touched. It requires great surgical care and delicacy of touch and manipulation to avoid the possibility of damage to the soft palate and pillars; and to operate hurriedly, blindly and entirely by sense of touch, as advocated by some, is certainly to be cautioned against. Every good operator has his own method to which there can be no objection provided the technique accomplishes the results desired and does no injury to any of the neighboring structures. My idea, personally is that we have not considered these possibilities for permanent injury, not only to the throat but to the voice, but in the future we should look with favor to those timely articles calling attention to the various defects in speech and function which may follow the faulty removal of the faucial tonsils. At different times I have advised the radical removal of tonsils as being sound surgically, but I did not then know of the possible serious complication that might follow if a technique was adopted or followed whereby innocent and unoffending structures were injured. In my own hands, dissection with the sharpest instruments gives the very best results. I have for obvious reasons avoided those instruments and methods that produce traumatism, however slight, and have had no case of sloughing or gangrene following.

Severe hemorrhage has followed the removal of tonsils, and it is a complication to be expected if one does much tonsil surgery. Every operator I have talked to about this subject, has had either primary or secondary hemorrhage. Some operators have abandoned local anaesthesia altogether and resorted to general

anaesthesia. Where this is done, secondary hemorrhage should not occur. I do not recall that I have ever had a secondary hemorrhage following general anaesthesia for all bleeding should be controlled before the patient leaves the operating room. This can be quite effectively done either by twisting the bleeding vessel or by ligation of the bleeding point. Yet, in spite of these positive measures at our command, for the control of hemorrhage and which are used by general surgeons every where, we know that secondary hemorrhage does occur and that serious complications—sloughing, aspirated pneumonia, lung abscess and prolonged convalescence—often follow. For various reasons and individual peculiarities, we cannot get all patients to submit to general anaesthesia in the hospital. In the first place, it adds an extra item of expense and there are some who abhor the thought of a hospital and general anaesthesia. However, if I could always have my way, I should never undertake to operate either under local or general anaesthesia, outside of the hospital. In other words, it should be classed as both a major and a hospital operation, strictly.

Barring the bugbear of secondary hemorrhage, there are many advantages and arguments in favor of doing the operation under a local anesthetic. First, because it is more attractive to the patient; Second, because the parts are in their normal relations; and Third, because the patient can take care of his own secretions and the slight hemorrhage, and thus avoid of sponging. Since, in addition to the local anesthetic, it is advantageous to use some of the agents that cause blanching of the tissues and constriction of the local blood vessels, it frequently happens, that in from three to five hours, there follows free and sometimes rather profuse hemorrhage. This is caused by a temporary paralysis of the walls of the blood vessels, due to the local hemostatic drug, thus, not permitting the vessels to contract and control bleeding. While this hemorrhage may not be alarmingly serious and in my own experience, I have had no great difficulty in controlling it, nevertheless, it causes both the patient and his friends much uneasiness and alarm. These emotions of the patient add very materially to the local condition and naturally contribute to longer and more difficult control of the bleeding.

Now, therefore, having noted the tendency to secondary hemorrhage following the use of local anaesthesia and desiring to save the patient and his friends the emotions of fear of serious bleeding and also to save myself many hurried and unnecessary trips to the hospital, I have adopted and practiced the immediate suturing of the pillars, not so much to control hemorrhage, as to prevent it. In apply-

ing this technique, now for more than a year, I have not had a single secondary hemorrhage. So far as I know, this plan of preventing tonsillar hemorrhage has not been advocated or practiced by any one but myself, though suturing, to arrest tonsillar hemorrhage, has been done from the earliest times. My technique after many trials and changes, is as follows; the tonsillectomy is done with sharp dissection, care being taken to remove no muscular or other tissue, except the tonsil itself, from the fauces. After controlling the bleeding, which is usually very slight, the fibrous aponeurosis covering the tonsillar fossa, is seized with suitable forceps, raised slightly and a curved needle armed with black silk thread is passed through the elevated portion of the fossa. Then a place just opposite where the thread now is, is selected and the needle passed as before. The threads are now tied with the operator's fingers in the patient's mouth. Two sutures to each side usually suffice, and I have had the same result with only one suture to a side. The needle does not penetrate the pharyngeal muscles and therefore can cause no injury to them. The sutures are removed at the end of about fifteen hours, as they have then served their purpose, and might after this time, invite infection.

The advantages claimed for this operation are: First, it prevents absolutely, any secondary hemorrhage, but is not intended to control hemorrhage, though it could be used advantageously for that purpose. However, the many drawbacks to suturing to control bleeding, are, difficulty of placing the sutures to avoid injury to the muscles, and the great inability to see in a throat, or do anything with a patient who thinks he is bleeding to death; Second, it certainly hastens healing by approximating the pillars for even twelve or fifteen hours. If we could prevent infection altogether, it would be ideal to close up the wounds and leave them as in other surgery; Third, it gives a great sense of security and satisfaction to know and feel your patient can have no occasion to alarm either himself or you.

I realize fully that this technique complicates and lengthens the operation, but why should we object to length of time when it fully compensates us for the loss, and why should we object to the extra effort to place the sutures, even though it be difficult of performance, when we can have such perfect security? Please don't conclude from what I have said that there is only the surgical side to the tonsil question. You must keep in mind that many constitutional troubles are caused by diseases of the tonsils, which are amenable to proper therapeutics. I cannot

but feel that the medical side of the question has been neglected and in many cases overlooked. Here, as on the surgical side, we must not let our zeal outrun our discretion. Here, as on the surgical side, we must exhaust every means at our command to arrive at a correct diagnosis before we apply therapeutics. Here, as on the surgical side, we must be Argus-eyed, to avoid injury and the wrong therapeutics. As I have repeatedly urged, we must cooperate, not only with the internist, but the pathologist. We must know that all membranous deposits of the tonsils are not the same pathologically and therefore, different therapeutically. Here, as in other fields, we must not treat symptoms. Let us seek the laboratory and heed its voice, provided that voice is in accordance with the clinical findings. The tonsil question has opened up an enormous field for speculation and investigation. Someone has said, "Let us be radical when we must and conservative when we may." Let us see to it that no operation that injures and no treatment that endangers is done.

DISCUSSION.

W. B. McClure, Lexington: In the very excellent paper of the essayist, which he did not have time to finish reading, he has some questions which are not easily answered, and in the short time at my disposal I shall only address myself to one phase of the paper. It is true that in mouth breathers, to remove the tonsils with the hope of getting results is often beginning at the tail end. My own practice in these cases is to begin at the gateway and ascertain whether or not there be a deviated septum, hypertrophy of the middle or inferior turbinates, nasal spurs or ridges, going into the posterior nasal chamber, and whether or not there are adenoids, all of which should be eliminated before the removal of the tonsil. If it is a chronic condition of the tonsil, the probabilities are, after having corrected all these conditions, you will still have to remove the tonsil. Especially is this true if it be the so-called submerged tonsil. In these cases the tonsil will have to go, but in my judgment you should attend to the removal of other conditions which may produce the tonsillar condition.

The essayist spoke of injury to the voice. I believe he overestimates the danger of injury to the voice from the removal of the tonsils. It is a well known fact that all celebrated singers of the past have had their tonsils removed, notably Madame Patti.

S. G. Dabney, Louisville: It seems to me, that Dr. McClure misunderstood what Dr. Purcell said. I think what he meant to say was that accidents occurring in the removal of the tonsils may injure the voice.

C. E. Purcell, Paducah: I had refer-

ence to accidents occurring through a lack of proper technic in the removal of the tonsil itself.

S. G. Dabney: In regard to the question of injury to the voice, I do not think it occurs as frequently as we have been led to believe. I have seen many cases where there was a good deal of scar tissue. It is not easy to do an ideal operation in the throat as elsewhere, but fortunately I have rarely seen a serious ill result, hardly ever, even though there has been cutting of the pillar. One might imagine that it would occur in singers, but my experience has been that it is not of as frequent occurrence as some practitioners believe. If I were to sum up the indications for tonsillectomy, I would put quinsy at the head of the list, especially where the attacks recur, and the sooner the operation is done the better it is for the patient. I would put next to quinsy, recurring attacks of tonsillitis with enlarged glands at the angle of the jaw, which are more frequent in children, but they are frequent enough in adults. Next I would put those vague systemic infections which are sometimes attended with a low grade of fever, sometimes but not always with enlargement of the cervical lymphatics, that come and go, provided no other cause can be found. The teeth or gums may also cause such disturbance.

J. F. Reynolds, Mt. Sterling: I have been very much interested in the paper of Dr. Purcell, as I am in all this subject. I do not agree with him on three or four points he has made.

First, I do not believe that systemic infection from tuberculosis and syphilis should bar us from removing diseased tonsils. In my opinion incipient and moderately advanced cases of tuberculosis always do better after the removal of these tonsils. My experience has been that the healing after the removal of a syphilitic tonsil is almost if not quite as rapid as the non-syphilitic. Second, the essayist says that he has adopted and practiced the immediate suturing of the pillars to prevent hemorrhage. This, in my opinion, is unnecessary surgery and should be discouraged by every operator.

After the surgeon has consumed thirty minutes or more in doing a tonsillectomy under general anesthesia, dissolution is near enough at hand without taking up fifteen or twenty minutes more to suture the pillars, thus increasing the danger of the life of the patient. I have not found it necessary to suture the pillars in more than one-half of one per cent. of my cases. With a very few exceptions I have succeeded in stopping the bleeding with Boettcher's tonsil forceps. I am not in the habit of removing tonsils in children under six or seven years of age.

In young children the tonsil secretion as well as the secretions from all other glands in the throat is very great. The antitoxic properties of the tonsil secretions will protect these young children against poisons of different origin, such as the different pus-producing germs.

If this viscid secretion destroys bacteria then why should we remove the tonsil until after the patient has passed the age when he is most susceptible to the diseases of childhood.

Hypertrophied adenoid tissue should be removed from every child regardless of age even as early as the second or third week.

In young children remove the adenoids and the tonsils will take care of themselves. I do not want to be understood as being opposed to the removal of tonsils. Remove all diseased or hypertrophied tonsils after the patient has passed his seventh or eighth year. If they are not removed the time is not far distant when they will cause trouble.

I remove tonsils under both local and general anesthesia. There is always more or less danger under general anesthesia especially in staticus lymphaticus.

If you are going to have trouble under general anesthesia, you will get it when you make the first cut, therefore to be sure that the patient is ready I use strong pressure with the adenoid curette on the tonsil and in the post-nasal region. If this does not interfere with the breathing I feel safe in going on with my work. I advise my patients to have this work done under local anesthesia, though the pain is sometimes a little severe but why should they not share a part of the responsibility?

In 1902 and 1903 I removed these tonsils by tonsillectomy almost exclusively. After having had three or four troublesome hemorrhages, I abandoned the operation of tonsillectomy for several years. For the past four or five years I have been doing both tonsillotomy and tonsillectomy.

I grasp the tonsil with a tenaculum and pull it well into the pharynx, then with a pair of scissors curved at an angle of about forty-five degrees, I cut the capsule in the supra-tonsillar fossae, then pass one blade of the scissors down behind the tonsil and the other on the outer surface behind the anterior pillar, then cut the capsule. The posterior part of the capsule is separated in the same way, then slip both blades of the scissors down behind the tonsil and dissect it out. By doing this operation I sometimes leave a small piece of the tonsil attached to the lower part but this can be removed in the same manner.

William J Thomasson, Newport: I have listened to Dr. Purcell's paper with a great interest and agree with him on many points. We admit that it is not always easy to determine the pathology of a tonsil. But in the majority of the cases that we see it is not difficult to determine the condition of the tonsils providing care is taken in making the examination.

It is far more difficult to find a perfectly normal tonsil than a diseased one. I doubt if there is one tonsil in ten thousand that is perfectly normal.

All tonsils should not be removed, but when this gland is diseased and when you can trace the systemic infection to foci within the tonsil or when the young child or adult has an acute otitis media, or has had tonsillitis or quinsy, then the tonsils should be removed.

Providing there is no systemic trouble that would contraindicate the operation, there is no danger of any man who knows his business removing a tonsil that is malignant nor will he operate during an acute inflammatory condition of the tonsil. Neither will he operate on a patient with active tuberculosis.

I cannot agree with the doctor that a tonsil operation can be too radical. Disrepute has been brought on this operation by the old clipping method, and in the hands of many the Beck and Sluder operation has destroyed vital tissue that not only reflects upon the operator, but the individual in many cases is worse off than before the operation.

We do not believe that our clinical experience has taught us that this operation has injured the voice, but in many instances that the singing voice has been improved, and wherever you find a case that the voice has been injured you will find that the operation was bungled and the pillars or soft palate has been mutilated.

Just so long as the tonsil operation is looked upon as a minor operation to be performed in the home by the general practitioner, by the general surgeon, or by the genito-urinary man, just so long can we expect the wrong tonsil to be removed at the wrong time.

E. D. Wells, Hinton, West Virginia: Dr. Purcell's paper has been of more than passing interest to me because I heartily agree with him as to the importance of correct diagnosis in tonsil work, and also as to the importance of tonsil study.

Why should we not place more study on a point of entrance for infection causing diseases of such grave nature as arthritis, osteomyelitis, adenitis, chorea, otitis media, etc.

In all our study of tonsil cases we should bear constantly in mind that all tonsils are subject to the following classification: First, healthy; Second, Diseased or Surgical.

It is admitted by all that the healthy tonsil is of probable aid to health. And, also it is known that the diseased tonsil is the focus of entrance for infection causing the conditions of arthritis, osteomyelitis, adenitis, chorea, otitis media, etc., and this diseased tonsil is also spoken of as the surgical tonsil because surgery (and radical surgery at that) is the only remedy offering permanent relief.

In thinking of the diseased or surgical tonsil, please disabuse your mind of the fact that it is always the large hypertrophied tonsil. The mere fact of a tonsil being large is no cause to say it

should be removed. But there are two types of the surgical tonsil that cause most of the injurious effects. The first is the so-called submerged or buried tonsil—situated well in between the pillars and well up; in fact, about one-third of each tonsil being hid by the plica triangularis, where the plica is thickened and so adhered to tonsils and pillars as to offer a complete shield to upper third of tonsil. This tonsil, because of its high position makes pressure on the superior portion of the lymphatic ring surrounding base of tonsil and these lymphatics in turn make pressure on the Eustachian tube.

This is your type of tonsil responsible for the otitis media and cervical adenitis along with other conditions.

The second division of the surgical tonsil is the small tonsil well bound down by adhesions to both anterior and posterior pillars—(these adhesions, of course, the result of former attacks of deep cryptic tonsillitis). These adhesions help to form deep pockets in which gather septic material, unable to drain outward, is absorbed thus establishing your focus of infection.

In regard to the question, "Would you advise the removal of tonsils in pulmonary tuberculosis?" I realize this is an open question—a question which has not received the full amount of study it deserves and, in my limited experience, I have not sufficient material to quote any per cent. of successes or failures, but in the last twelve months I have had six cases referred for examination of tonsils by specialists in pulmonary tuberculosis. In each case I found the tonsils diseased, history of repeated attacks, etc. In each case I advised and did a tonsillectomy and I am glad to say there has been an improvement in each case with very marked improvement in three cases. So I must say I believe that in some cases of pulmonary tuberculosis that tonsillectomy is indicated. However, I should be very glad if Dr. Purcell would give us his reason why he advises in all cases of pulmonary tuberculosis against tonsillectomy.

As to the direct question "What shall we do with the diseased tonsil?" I want to say that personally, I don't believe any treatment will do any good whatever to a tonsil that has gone through repeated attacks of deep cryptic tonsillitis.

Those in favor of conservative measures, say "Why not spilt the tonsil or curette the crypts?" Very well—but what is the result? You have scar tissue from where you split the tonsil or where you curette the crypt, and this scar tissue helps to form more pockets in which more septic material shall gather to be absorbed into the system.

But again, the conservatives say—"But so many tonsils are removed upon a wrong diagnosis"—allow me to answer this: Don't blame

the operation because a fault was made in diagnosis.

Let us diagnose our tonsil cases correctly as either a healthy tonsil or a diseased tonsil and remember that a tonsil once diseased from deep cryptic tonsillitis is always afterwards a diseased tonsil, and the only way of relief for a chronic, diseased tonsil is tonsillectomy.

C. E. Purcell, (Closing): If I could have finished the reading of my paper, I would have presented the method of suturing the pillars, a method not only for the control of hemorrhage, but one to prevent hemorrhage.

I had expected quite a lot of opposition from this, and perhaps it would have come if the paper had been read in full, but after trying this procedure for more than a year, and having changed the technic, so that there can be no objection to it, so that there is no deformity or impairment, or involvement of the important structures, I felt that I could present the matter to you, and if the technic I advocate is carried out, there can be no objection to the method.

As to the use of local anesthesia, I think we all realize that surgery is coming more and more to the use of local anesthesia, and if I may digress for a moment, I will prophesy that in a few years we will see more important operations done under local than under general anesthesia. It is true, some shock will follow the operation done under local anesthesia, and quite likely more shock will follow a general anesthetic. All things considered, the safety of the patient, and the freedom from any danger of the anesthetic, if the patient is old enough and brave enough to undergo the operation under local anesthesia, I think the advantages will far outweigh every other consideration.

Foreign Bodies in the Esophagus.—Ferreya uses a urethra catheter, No. 16 or 18, and half a yard of coarse silk, No. 3 or 4. He lubricates the catheter profusely with petrolatum, and introduces it gently into the esophagus three or four times. This mobilizes the foreign body, arrests the spasm and lubricates the passages. Then he winds the silk, previously moistened, around the lower third of the catheter, that is, for about 10 cm. from the tip. The catheter and silk are then lubricated anew, and it is introduced again into the esophagus, very gently. When it is felt that the tip of the sound has passed the foreign body, he twists the catheter until he feels a slight resistance and then draws it out, having the head bent forward a little, and still keeping his forefinger in the larynx. The foreign body generally comes out at the first attempt; if not, he repeats the procedure until it does.

ROENTGEN RAY IN THE DIAGNOSIS OF BONE AND JOINT LESIONS.*

By J. B. MASON, London.

The literature on Roentgen ray in diagnosis has been so extensive recently, and advances in Roentgen ray technic so rapid, its field of usefulness so broadened, that one hesitates to speak on the subject unless he has something new, or at least, out of the ordinary to present.

The attention the subject is receiving is due to several causes, chief among which is the improved type of apparatus obtainable to-day as compared with that of a few years ago. Again, the profession has become better acquainted with its powers and possibilities, both for good and evil; they are more cautious in its use, safe-guarding both themselves and their patients from any possible harmful results that might follow its use, such as have occurred in the past.

Any bad results from a Roentgen ray examination to the patient to-day is unheard of, and should such occur, it would come as a very great surprise to the careful operator.

It is well to keep in mind at all times that it is only one method to be used in arriving at a diagnosis and no other source of information should be neglected, especially a careful history of a given case under consideration.

It is not within the scope of this paper to enter into any of the details or technic of Roentgen ray work, as this concerns the operator alone. Neither is it necessary at the present time to lay the same stress on a Roentgen ray examination as formerly, or to point out the advantages it offers to both patient and physician where such an examination is indicated, for it is recognized that it will often give us information not obtainable in any other way.

Particularly is this true of injuries about the joints where the possibility of a fracture must be kept in mind. It is the opinion of Roentgenologist, having large opportunities for observation, that the majority of injuries about the ankle and wrist joints of very marked severity, are fractures and not sprains.

The earliest use of the Roentgen ray was to diagnose fractures and locate foreign bodies, but its field of usefulness rapidly extended until it is now relied on to recognize all pathological changes taking place in the bones and joints, and what is more important, to differentiate one from the other.

This is well illustrated in a case recently seen.

An 18 year old school girl was sent to me for an examination; she had been having trou-

ble in the right tibia for some time, supposed to be tuberculous; the examination showed a syphilitic osteoperiostitis involving fibula as well as tibia. (Fig. I.)



FIG. I

After making the diagnosis other confirmatory proofs were found.

Syphilitic bone lesions belong almost exclusively to the tertiary period, and are not very common. We of the rural district see much less of its ravages than do our city confreres. On the other hand, we do see a very great deal of tuberculosis in all of its manifestations. This had much to do with not suspecting the true nature of the trouble earlier. The tibia, as was true in this instance, is the most frequently involved bone in these cases. The importance of a roentgenographic study in a case of suspected syphilitic osteitis can hardly be over-estimated, as in practically every instance, even though the clinical symptoms be misleading, a properly made roentgenogram, correctly interpreted, will make the diagnosis, as the bone picture is quite distinct from that seen in any other form of osteitis.

While the symptoms of fracture are well known, and they can often be diagnosed at a glance, their differentiation is not at all times easy from the symptoms obtainable alone. The profession is much more careful about making a diagnosis of sprain than formerly,

*Read before the Kentucky State Medical Association, Louisville, September 21-23, 1915.

still there are cases where it is almost impossible to arrive at a diagnosis without a roentgenogram, it does not matter how painstaking and careful you are. Unless seen early, there is usually marked swelling which tends to conceal the deformity that might be present, and crepitus is either not obtainable or often not recognized.

Such was true in the case of Mr. X., who was thrown from a buggy and sustained an injury to the left ankle. He was seen a short time after the injury by a competent physician who thought the injury a sprain. As the accident happened away from the patient's home, it was thought best to put it in a plaster cast. I did not see him until some time after the injury, when he came to me to see if we could find some reason for his continued disability, and the condition here



FIG. II.

shown was found; a fracture (Fig. II) of the posterior third of the articular surface of the tibia with the astragalus, extending upward about three inches, with marked displacement of the anterior portion. You can readily see why crepitus was not found, and notwithstanding the displacement shown, there is not much deformity noticeable on inspection, and the chief complaint is the inability to flex the ankle.

I accidentally found a fracture of the inner condyle of the humerus in a young man

sent me with a suppurating elbow for examination. The history of the trouble dated back about two years: about a year previously he had had an operation by a surgeon, but had a sinus persisting. Dr. Pennington sent him to me for a roentgenogram before attempting other operative treatment. Following the usual custom of getting a two-way view of these cases, I made both a lateral and an antero-posterior view which shows a fracture of the internal condyle, (Fig. III), and the bone



FIG. III

condition as shown (Fig. IV). The operative treatment for the bone condition was carried out without disturbing the fracture and both made a satisfactory recovery.

Parker, (*Journal A. M. A.*, Sept. 19, 1914), in reporting a fracture of the femur into an actively tuberculous knee-joint, says, "A fracture into an actively tuberculous joint can heal in a satisfactory manner, leaving only the original joint trouble for treatment, according to the usual methods pursued in such troubles." After finding the fracture in this young man, we learned that two days before consulting Dr. Pennington he had fallen from a bicycle, striking the elbow against a stone, and at the time suffered considerable pain, which accounted for his injury.

I have already referred to the use of the Roentgen ray in locating foreign bodies. This can be done with certainty and precision, pro-

vided their density differs from that of the tissue in which they are imbedded, and such



FIG. IV



FIG. V

however, in the case of Mr. B., who more than 26 years ago received a wound from a 38 caliber pistol on the inner side of the right knee joint. The ball lodged in the leg and he had a persisting sinus, for the relief of which he had undergone three or four operations. We found the ball in the tibia surrounded by an area of diseased bone. The ball was removed, proper treatment carried out, and he made a speedy recovery.

The instances here cited serve to show the importance of the subject, and are common every-day occurrences. There has been no attempt to cover the entire field of bone pathology, but I urge you to let no bone lesion, especially, if it be about a joint, pass out of your hands without availing yourself of its aid.

DISCUSSION.

D. Y. Keith, Louisville: There is one point I would like to speak about in regard to ankle fractures which are diagnosed commonly as sprains, and while they are not of daily occurrence, we find them frequently in people who are X-rayed. The diagnosis is made of sprain in many instances of injuries about the ankle, when we find they have a fracture, usually not of the tibia, but we find an oblique fracture of the fibula, with occasionally a little piece of the internal malleolus of the tibia broken. These cases are not infrequently diagnosed as sprains.

I had one such case in the office a few days ago, the accident happened in Cincinnati and the man walked into the Marine Hospital in Louisville. He did not have any deformity; there was no swelling and but very little pain. He had a bandage on which relieved the pain. We find a great many sprains of the ankles and injuries about the wrist joints in which the X-ray plates will show a fracture.

In the plate exhibited here by Dr. Mason, I believe there was a fracture of the posterior part of the tibia, with a backward dislocation of the ankle joint. Cotton, of Boston, on fractures states that it is one of the rarest fractures he has experienced around the ankle joint, having seen but eight or ten such cases in his own experience, and only about four of these coming under his own observation, the others having occurred in the practice of other surgeons. They are the hardest cases to replace and keep replaced because of the posterior tibia being torn off the joint slips backward. In 4,000 or 5,000 X-ray plates I have seen but two instances of this type of fracture. When the posterior lip of the tibia is torn off you have a displacement of the ankle joint which is very hard to control.

In regard to infection you can in most cases differentiate between infection of the bone and tuberculosis even without the history. You find a staphylococcus infection practically always in-

is usually the case. Not all foreign bodies give their host troubles. This was not true.

volves the diaphysis of the bone, while in tuberculosis it involves the epiphysis, while syphilis may involve any part of the bone. In syphilitic cases you find a destruction of bone, or you find ossification. You may have just a localized periostitis or an acute infection of the bone in which you cannot see the canal of the bone at all. In syphilis the periosteal covering of the bone is rough with thickened medullary canal or the canal may be entirely absent on account of the denseness of the bone.

I would like to emphasize what Dr. Mason has said regarding the practical value of having two plates in fracture work. We find a great many practitioners who make one exposure and give a negative diagnosis of fracture. You may make one exposure and the position looks all right. One picture, aside from making a diagnosis of fracture, is not worth very much so far as position goes. In making shadows, I can hold my two fingers in this position (indicating), and make a shadow on a piece of paper, and outside of the increase in thickness of the shadow or density, where the over-lapping is, the bone will look all right, and if you have the least bit of overlapping it may look straight, but if you make another exposure at right angles to the first, you will notice the displacement. Every fracture exposed in two positions at right angles to each other is better than stereoscopic plates.

There is one point about infections of bone that I desire to call attention to at this time, and that is, cases come into the laboratory quite often with history of a recent infection, an infection possibly of one week, ten days or two weeks, and the physician expects you to show a periostitis or some involvement of the bone, if you cannot do so he is very much disappointed. There have been made quite a number of experiments of infection of bones in guinea pigs, and it is believed in acute infections of bone that, aside from where you have a large abscess, showing a dark shadow, no bone involvement will show until about three weeks after infected. In a lesion of bone there seems to be some change in the bone, that we are not able to find in animals in less than three weeks time, and it is doubtful whether any acute infection, if it has not been longer than three weeks, can be found. If you have a plate made later you will find the changes. To have a change from the normal there must be either destruction of bone or new bone formation. The clinical picture in acute metastatic bone infection is perfect enough for diagnosis.

As to the location of foreign bodies, you will find very few metallic substances, that cannot be accurately localized by the method we have at our command. Many new methods for accurate localization of bullets, etc., are being used in the present war which, we are sure some definite practical technique will be put forward by some one of the many workers upon the firing line.

C. Z. Aud, Cecilian: We have with us to-day Dr. J. B. Murphy, of Chicago, a man who needs no introduction to a Kentucky assembly of physicians. He needs no introduction to any part of the world. I move that Dr. Murphy be invited to take part in this discussion and be given a seat on the platform.

Motion seconded and carried.

President Kincaid: We are proud to have Dr. Murphy with us, and I would like to have him come forward, take a seat upon the rostrum, and participate in this and other discussions if he desires to do so.

John B. Murphy, Chicago: Concerning the paper of Dr. Mason I have been very much interested in it. He brought out some very important features, particularly with regard to the use of the X-ray picture. First, its positive phase correctly, and second, its positive phase negatively. The X-ray picture can give you positive and correct information, and it can give you incorrect information. I put it in that way. X-ray pictures are often misleading, and the author placed great stress on a double picture, and often a triple picture is important in X-ray work in order to draw positive conclusions. One picture in connection with fractures is of little or no value. There are certain places where the X-ray requires as careful analysis in reading in order to draw positive conclusions as does the physical examination of a patient. The most conspicuous one in which error occurs is in connection with shoulder joint injuries or luxation and fracture at the shoulder. Sometimes you may make three or four or even six X-ray pictures, and not one of them will show the true situation, while the physical examination will reveal the situation with exactness, so that it must be a combination of the physical examination, with the X-ray, or the physical examination confirmed by the X-ray that will enable you to draw a correct conclusion. In the second place, it is difficult to interpret correctly X-ray pictures in connection with lesions or injuries about the ankle joints, determining the type of luxation, the type of fracture and position, it is almost as difficult to read the X-ray correctly as it is to interpret the physical signs and manifestations immediately after an injury. The physical examination is rendered more difficult on account of the swelling that takes place in these injuries. This has been very well accentuated in one of the pictures you have seen, showing the difficulty of interpreting the X-ray picture in connection with ankle joint fractures. Where we get little or no definite information, where we get information that does not lead to good results, we should recognize that the absence of information through the X-ray is of no particular value in the acute tumors and in the acute infections. The sarcomata often attain considerable size, and metastatic carcinomata of-

ten attain considerable size with destruction of bone extensively, before the X-ray picture shows anything you can interpret in a positive way. The author laid stress upon the change that takes place in connection with infection, saying that it does not show for quite a number of weeks afterwards. Why? Because the change from the X-ray is shown by rarification or condensation of the bone, and it requires a considerable length of time after infection before there is regeneration in the margin of the bone in order that it may cast a deeper shadow. Where we need the X-ray above all things, and where it is not of much value, is in the acute metastatic infections, in the acute osteomyelitic lesions. In the acute osteomyelitic lesions we have destruction of bone occurring at its maximum at probably forty-eight hours, that is, forty-eight hours after infection is disclosed in the bone, we probably have the maximum of destruction of bone. If you are going to inhibit that destruction, you must therefore relieve the pus tension in the bone inside of forty-eight hours, and preferably inside of twenty-four hours. It is the same proposition with regard to the gangrenous appendix, if you would prevent perforation, you must have the abdomen opened and the appendix out on an average of thirty hours. If you would save necrosis of the shaft of the bone, you must have the abscess tended to inside of forty hours. Fortunately, again, we have in this class of cases such a typical classical uniform picture clinically, that when it is read right, a positive diagnosis can be made, and just as positive as any diagnosis can be made by means of the X-ray, and the proper method of treatment can be instituted. (Applause).

J. B. Mason, (Closing): I wish to thank Dr. Keith and Dr. Murphy for their discussions, both of whom emphasized great care in reading a plate after it is made. I very frequently make a plate from which I am unable to arrive at a diagnosis. I frequently submit plates to men of more experience and ask them for their opinion on them, and very frequently they have told me they were unable to make a diagnosis. Unfortunately, as Dr. Murphy has pointed out, the X-ray gives no information of these acute bone lesions. By the time you make a diagnosis with the X-ray of them there has been so much bone destruction, it is almost a question of minor importance whether the diagnosis is ever made or not with the X-ray. If we interpret the X-ray picture exactly, we have one method of arriving at a diagnosis, but we should consider each individual case a separate entity, and the acute bone lesions should be diagnosed before we have any occasion to X-ray them.

INTERSTITIAL NEPHRITIS; ITS CAUSE AND PREVENTION.*

By **STINSON LAMBERT**, Owensboro.

It is a sad misfortune that a disease so serious in its effects should receive so many definitions, misleading and confusing in its study. The terms exudative and non-exudative, parenchymatous and a host of like names.

It is no great wonder that it ran so long before its true history was given by Dr. Bright; since no two cases present the same features, clinically studied. This condition has more than any other cause led to mistakes in diagnosis, until the patient has fallen in the streets from being overcome by the slow poison and the apoplexy and paralysis tells us what has been going on in the vascular system. We may have relied on the test tube for our information but it is not to be relied upon solely. It is well to understand other means must be used before we are to judge all cases. It is a very excellent assistance when taken with other instruments of decision, but to rely on its findings is to stop short of a true examination. It is of no use to say the findings of albumen or not finding of it gives a correct history of the disease; since you may be like the old woman who was called into court to give her opinion of good indigo said, "Wall you all can tell good indigo, jest put a small piece of it into a pan of water and it either sinks or swims," and she could not tell which.

So it is with the finding of albumen in the urine. It is or is not. You are still in the dark.

We find after death from chronic nephritis a great many varieties in the gross appearance of the kidneys. Some are large, some are small, some are red and others white. There is no regular correspondence between these gross appearances of them and the clinical symptoms, manifested before death. We find in these same kidneys changes in the renal epithelium, in the stroma, in the glomerulus and in the arteries. Sometimes one, sometimes the other of the elements of organ is most changed. There is no regular established order over another and the clinical symptoms, in any case.

In the year 1827 Dr. Bright promulgated his views of nephritis. He regarded the kidney as the sole cause of it. His pointing out that organ has been the cause of much study of all morbid pathology. We have learned much of it, but we do not now hold to the earlier notions. We have learned it is a general arterio-sclerosis or a parenchymatous dis-

*Read before the Daviess County Medical Society.

ease and hence we are able to direct our treatment to cause and not effect. Many writers follow close on his discovery; each classifying and attempting to show that the varied clinical phenomena depended upon the stage of infiltration of this organ. And so they had this classical notions lined out:

1. The stage of hyperemia and of commencing exudation.

2. The stage of exudation, commencing transformation of exudate. Lastly: that of the failure of the functions and atrophy.

To this outlined classification many subdivisions have been named and though clinging to the older notions that the kidneys alone were at fault we owe it to that noble German Virchow's Cellular Pathology, published in the year 1858, a clear understanding about nephritis.

He developed the doctrine that in Bright's disease either the stroma, the tubes or the Malpighian tufts were at fault and hence the confusion in symptoms.

Now, having learned that albumen in the urine is similar to having a cough and that neither tell us the real cause we are better prepared to make our conclusions as to real causes. We may be deceived by our albumen test but if we check up with the instrument for taking the blood-pressure, sphygmomanometer, we have one of the best aids in correcting our understanding of the approaching danger of all else. This aid, high blood pressure, is coming into its own as a clinical entity of far reaching significance, that it calls imperatively for attention. When found no time should be lost in correcting the faults causing this cardio-vascular change; since it brings the patient just that much nearer to the grave and serious condition that must soon follow, retinal and cerebral apoplexy and other alarming conditions following the pathological fulfilment of a deranged metabolism, the inevitable result of wrong living. We should be on the alert to recognize the necessity of correcting high blood pressure, bring the patient's mode of life into something like compatibility with the demands of physiological requirements. The quantity and quality of food are regulated, the excretory organs are looked after, exercise and general hygiene have their due share of attention, and yet one of the most important factors in the management of these cases is frequently overlooked—the correction of the digestive derangement of the organs of internal secretion and digestion, involved in the pathological process. All other rectifying influences may amount to little if the importance be not recognized of restoring the glands of internal secretion and digestion to something like normal functional integrity.

It is safe to assume that a majority of interstitial nephritis are due to a toxemic origin and a large number of them to an intestinal putrefaction, due to excessive ingestion of animal protein, in food. To the functional incapacity of the digestive glands to deal with the quantity and quality of food ingested.

It is not definitely known why the toxins arising from the intestinal putrefaction causes this rise in blood pressure, but it is most likely due to the hyper-secretion of certain ductless glands. Take the pituitary, parathyroids or the adrenalins. What is the relationship between these glands and this general toxemia? We are unprepared to explain all these bad effects and what causes this abnormal change in the kidneys. We know it is an intoxication and it may be found to be syphilis as the greatest cause, malaria, alcohol, and last but not the least tobacco poison. In fact sphygmomanographic readings plainly shows that it quickly affects the blood pressure and I am assured that this little innocent weed has a greater clientage than almost any other poison in the production of interstitial changes in all the delicate organs, and more especially that of the kidneys. I cannot see why a thing so poisonous as tobacco taken into the system and producing such a great effect will not in the end do equal harm. Taking arterio-sclerosis and its kindred diseases we surely find it most common in the users of tobacco.

Viewing the anatomical arrangement of the kidney we may see that not all its parts are alike affected; that the process begins either primarily in the connective tissue between uniferous tubules or in the tissue present in the periphery of Bowman's capsule. This obstruction to the afferent and efferent vessels, causing cystic formations in the organ and this resulting in an over production of urine, by reason of new formation of connective tissue around the tubules and the filtering of water through the glomerulus.

In the beginning this passive congestion will cause an increase of urine with or without albumen, depending on whether the epithelium of the uriniferous tubules or glomerulus have been damaged enough to cause the escape of white blood cells through the membrane or not.

It is here the doctor may be led astray, if he relies on his test tube solely for a diagnosis.

It may be said there are but two forms of nephritis: The one where the epithelium is damaged, giving us the parenchymatous nephritis and the other where the chief trouble is at the interspaces between the tubules or that of interstitial nephritis, where the interstitial stroma is first diseased.

Both are due to some auto-infection, or in-

toxication of the circulating blood stream and there are a host of these causative agencies and if you will follow the action of the ductless glands I believe we will find in them many, if not all our gout, diabetes, arthritis, the arterio-sclerosis, if not old age.

The intimate connection between the kidney and the sympathetic nerve system and the study of the effects of the action of the ductless glands may yet furnish the solution to the primary dilation of the arterial vessels of that organ, which become dilated and their walls thickened and unable to contract and consequently remain open after death.

This thickening of arteries and new growth in between the walls of the vessels, is due to the blood carrying toxic elements, causing the intima to be filled with connective, organized tissue up to and around the capsule, as I have stated, even entering into the glomeruli with this foreign growth. This enormous thickening and loss of contractility easily explains to us why we have the abundant flow of urine. The pressure exerted upon the tufts of vessels within the Malpighian capsule, while the dilated extremity of the vessels in the uriniferous tubules is unable to control the flow of blood just outside of them. If for any reason this is constantly dilated, and its walls are thickened, it loses the normal contractility, and a greater volume of blood is poured into the tuft from vessels. This with the unequal strain upon them, form the persisting blood pressure; hence a more copious urine is voided.

This is substantiated by both clinical and pathological data. It is here that the microscope, in the hands of an experienced and trained pathologist gives us the best help, coupled with our diastolic and systolic pressure taken with an approved sphygmomanometer.

Continued high blood pressure is one of the first symptoms in interstitial nephritis, and the proper understanding of the treatment of the various conditions associated with which the arterial pressure is above normal calls for study of the underlying cause for the abnormality. Such cases, as a rule, may be divided into three groups: Mechanical, toxic, sympathetic and nervous. Mechanical when the arterial changes have gone and we have a general or local arterio-sclerosis. Toxic when we find the blood loaded with the elements, foreign to normal health requirements. Nervous when a reflex sympathy may load the kidneys with an undue amount of blood as in hysteria and like conditions.

These phenomena, no matter what they are, bring about changes in the composition of the blood and by this alteration of the pathological process, in which the transudation of blood

from the lumen of the capillaries into the tissue and perivascular spaces has been fully reached, the tissue of glands in which this abnormal phenomena has been developed, and which should be sustained in their normal process of growth and repair by the endomosis and isomeric change, at once begin to undergo abnormal transformation. As a result of this action, there may be partial dissolution of the involved tissue or gland, or there may be destruction with replacement of the old and original structure by new and poorly formed white fimbriated connective tissue, in and around these delicate blood vessels in the Malpighian tufts.

By keeping constantly in mind a clear conception of the physiological laws which govern the nutritive supply and the excretory work to be performed by the renal glands, it is easy to explain and appreciate the methods pursued by Nature in producing these abnormal kidney lesions. With a clear understanding of the precise causation and methods of development, the treatment becomes rational and scientific and no longer pure empiricism.

The clinical evidence may be summed up with these facts: A high blood pressure with an occasional renal cast, accompanied with a small amount of albumen or none at all; and a diminution of urea, with morning headache is a strong evidence of interstitial nephritis.

This blood pressure may run from 160 to 260 and you may look for cerebral hemorrhage, uremic coma, optic neuritis, delirium and many unlooked for accidents to happen at any time. Many of the sudden deaths following trivial ailments, in which we are taken unaware are due to this hidden and mysterious kidney involvement. It behooves us to be on our guard and look well for it in all cases, where habits tell us histories.

By way of recapitulation, I wish to add what Dr. Charles F. Bolduan, the food expert of New York City Health Department, has to say, in an article in the *Scientific American* of July 17, 1915. "That 14 out of every 1000 die annually in the U. S. at the age of forty and over; that the diseases playing so prominent a part in the mortality of men over this were heart disease, arterio-sclerosis, including Bright's disease; and without citing the figures, says, "has revealed a marvelous increase in late years and also there has been a wonderful increase in certain diseases of the nervous system."

I may add that the figures taken from the Health Institute and Insurance Statistics show that 65 per cent. of all deaths show disease of the kidney and that the death from this is greater than consumption or cancer.

With the conception of the etiological fac-

tors and the method of development of these lesions of the kidneys we are in a position to study intelligently both acute and chronic interstitial nephritis and treat successfully as well as to prevent its beginning.

Quit your whiskey drinking and the using of tobacco and all excesses and die of ripe old age. Learn we do not so much die as kill ourselves and blame the fool doctor for not telling us sooner.

PUERPERAL ECLAMPSIA; REPORT OF FOUR CASES.*

By W. H. JOYNER, East Bernstadt.

Case 1. Mrs. S. G., age 73, six-para. So far as could be learned, she had had no trouble in labor until now. Called her husband at 4 A. M., March 18th, 1912, after she had had a convulsion and thought she was in labor, a non-registered physician was called who gave her teas, etc. She had many convulsions but delivered herself about 10 A. M. He delivered the placenta but did not wait to see the outcome. He told the family that he could do no more, but believed the woman was going to die and departed leaving her unconscious.

I arrived about 6 P. M., (8 hours after delivery) and found the woman very cyanotic, pulse about 120, weak but regular, respiration about 30, very irregular with a convulsion about every 30 minutes, lasting about three minutes.

I gave hypodermic of morphin-sulphate, 1-4 grain atropine sulphate 1-500 grain after which there were no convulsions, upon examination I found the uterus not contracted, by manipulation both external and internal it responded nicely stopping the hemorrhage at once which by this time had amounted to about 3000 c.c. I catheterized her obtaining about 150 c.c., highly colored urine which I did not examine.

She remained about the same throughout the night, her symptoms never, at any time, seemed to abate until she died at 6 A. M. (12 hours after I saw her). The child seemed to be healthy and remained so, as long as under my observation. Case 2. Mrs. J. M., age 27, six-para, according to her husband was taken March 16th, 1912, with nervousness, her physician was called who made a diagnosis of "dementia." She had a convulsion March 23rd at 10 A. M., and they were unable to get a physician until I arrived at 2 A. M., March 24th, (14 hours after the first convulsion) and found that she had delivered herself about 1 A. M., an hour before my arrival. The child was still born. I at once gave her a hypodermic of morphin sulphate, 1-4 grain. I

delivered the placenta with about 1000 cc., blood clots, etc., her pulse was 100, weak and thready, but regular, she was extremely cyanotic, respiration about 25 and irregular. I gave her, during the remainder of the night, two low enemas of normal saline solution, about 1000 c.c., each, which she retained.

Her condition remained about the same until she died at 6 A. M., sixteen hours after I first saw her. I did not advise consultation since I thought it useless.

Case 3. Mrs. R. S., age 22, primipara. Had convulsion March 2nd, 1913 at 1 P. M. while preparing dinner and had 2 or 3 more before I arrived, about 3:30 P. M. I gave her a hypodermic of morphin sulphate, 1-4 grain. I found the os dilated to about the size of a dime. I advised consultation, but could not get it. Under chloroform anesthesia I dilated the os, as quickly as possible and applied the forceps and delivered a child weighing about 8 1-2 pounds, at 6:25 P. M., there was some post-partum hemorrhage easily relieved in the usual way.

There was one convulsion after delivery, but did not return after hypodermic of morphin sulphate, 1-4 grain. I ruptured the perineum and sutured it, but owing to the material at hand lost the stitches.

The woman did not regain consciousness for three days.

With the exception of the ruptured perineum, mentioned above, the woman made a complete and uninterrupted recovery. The child showed no evidence of intoxication.

Case 4. Mrs. S. C., primipara, age 18, had three abortions about the second or third month, the cause so far as I was able to learn was idiopathic. I gave her tonics such as iron, quinine and strychnin and uterine sedatives, at intervals, throughout the entire period of gestation.

I saw her September 9th, 1913, at 5:30 P. M. in the beginning first stage of labor. I kept her quiet in the recumbent position. Her pains quickly subsided and I returned to the office about 8 P. M. In response to a message, I returned again about 7 A. M., September 10th. She had light, so-called, cutting pains, until 12 noon, when during a pain she had a convulsion. I at once gave her a hypodermic of morphin sulphate, 1-2 grain, and sent a messenger for my case and a consultant. He returned at 1:10 P. M., with the case but no consultant. She did not regain consciousness but remained quiet, under the morphine, until 1 P. M. when she had another convulsion, I gave her 1-4 grain morphine sulphate. I had everything in readiness when the messenger returned. Very little chloroform was needed, and I at once applied the forceps and delivered her of an eight pound

*Read before the Laurel County Medical Society.

child at 1:30 p. m., cyanotic and did not seem to breathe. While I was trying to revive the child I had the nurse watch the mother for hemorrhage. She informed me that the patient was having a severe hemorrhage about fifteen minutes after delivery. I at once manipulated the uterus both internal and external, it at once responded with a good contraction stopping the hemorrhage at once, but not until she had lost about 2000 cc. of blood, I used a small uterine tampon which I removed next day.

While I was engaged with the mother, the child, with the aid of the nurse, revived and was doing nicely. I had a pretty severe perineal laceration, which I at once repaired.

The mother regained consciousness in about two hours, seemed perfectly rational, but had severe migraine for two days.

She made a complete and uninterrupted recovery and was able to go visiting in two weeks.

The child had a light convulsion when it was four hours old, but quickly revived and shows every indication of being in perfect health.

In the foregoing you will note that I did not make urinalysis, this is due to the fact that I did not have opportunity.

Case 5. Mrs. G. L., age 41, ten-para. I first saw her in labor about 10 A. M., February 25th, 1913; she was beginning first stage of labor, with the slow, light, so-called, cutting pains, with very little dilatation of the os. She was somewhat irritable and nervous but owing to her temperament I did not give it much concern.

She went the course you would expect until I delivered her of a six pound child at 12:10 P. M., the following day, fourteen hours after I first saw her.

The child seemed to be very weakly and did not cry lustily. It died of atelectasis, at the age of five days.

The mother seemed in fair condition after delivery and remained so for 48 hours, when she had quite a reduction of the quantity of urine, dry skin, migraine, palpebral edema, and other symptoms indicating kidney lesion.

Urinalysis showed specific gravity 1028, acid in reaction, albumen which I estimated to be about 1 per cent. I at once made a diagnosis of acute nephritis and treated accordingly. She died February 2nd, four days after delivery.

This case is of interest to know, since it shows that the finding of albumen in the urine is not a sure sign of eclampsia.

RHEUMATISM.*

By T. A. PEASE, Kirbyton,

Rheumatism is one of the largest words in medicine if we figure from the number of ailments it covers as well as the inefficiency in diagnosis and etiology we hide with it.

Most every painful malady we meet, the origin of which is definitely known, is termed rheumatism, at least by some of us.

If I should be asked what rheumatism is, I would not know just where to begin nor where to leave off, would you? The text books of a few years hence are very well agreed on a definition something like this. "A constitutional disease of unknown etiology, evidencing inflammation of the locomotor apparatus, accompanied by great pain and tenderness with tendency to change from one point to another."

It seems vague, doesn't it? There are a great many divisions designated, with regard to its age, location and tissue involved, as acute, sub-acute and chronic, muscular, articular, etc. I think the term should be confined to those inflammatory conditions of the joints which are caused by the streptococcus rheumaticus, in contradistinction to gonorrheal arthritis and other varieties of infection. Investigators, I think, agree that the "so-called true rheumatism of joints is primarily caused by a streptococci. Still there are eminent authorities who cling to the uric acid origin of the disease. Sam Sea for instance.

ETIOLOGY.

Secondary. The age most susceptible is from 15 to 25, but it is not very uncommon at any age. When seen in children, girls are the most often affected. In later life it affects the male sex more frequently, due, no doubt, to the difference in habits and occupations.

The chronic type, that which produces permanent deformity, (arthritis deformans), is of course most usual in elderly people.

A text book case of the disease begins with a short prodrome, malaise, headache and general muscular aching. Then comes the rise of temperature followed shortly by localized pain, swelling and tenderness of one or more joints. The joints most frequently involved are those larger ones of the leg or arm, ankle, knee, wrist or elbow and these show a tendency to subside in the joint or joints first involved, and to appear almost simultaneously in one or more of those previously not infected.

I will let Dr. Poole explain why this latter is true. This condition may keep up for six days to six weeks, or longer, and no one can

*Read before the Carlisle County Medical Society.

tell at the outset which class the days or weeks is going to be the one he is treating.

The chief danger from rheumatism lies not in the permanent disorder of the infected articulations but in its complication of the heart. There may be a resultant pericarditis or myocarditis, but the most frequent and probably the most serious is a left-sided endocarditis, resulting often in some leaky valves. Briefly that is the way a typical textbook case of rheumatism will look. But in my limited experience I have seen the irregular types far more frequently. Myalgias, neuritis, painful joints without inflammation, neuralgias, and those things are seen most every day.

Our success in treatment will depend upon our ability to find the pain or seat of infection and the removability of that same. A great many painful conditions will disappear very suddenly and permanently after the removal or their successful treatment of infected tonsils, and the same will apply to infected piles, fissures and anal fistula, chronic appendicitis, stomach and duodenal ulcerations, colonic infections.

The correction of flat-foot will relieve some cases of apparant rheumatism of the legs and thighs. Other more or less frequent causes of obscure origin in females will be located upon an examination of the genito-urinary tract. I don't mean the gonorrheal cases. Of course the treatment of cases where no such conditions are found will be symptomatic.

The salicylates and various antacids have all been used with some success.

Rest, heat and moisture and eliminants are all useful in their places.

Now I would tell you all about the treatment with vaccines, phylacogens and those things only I don't know anything about them.

Radium Treatment of Cancer of the Uterus.—

The radium gave good results in the hands of Polubinsky. In 23 cases, 9 gave complete recovery; of these, 2 were operable cases, and 7 inoperable. In the remaining 14 cases a complication developed in one, namely, a retrovaginal fistula. In 6 there was a relapse after temporary improvement. No benefit was apparent in 3 cases; one patient died during the treatment. The others gave dubious results or the outcome is not known. The cases of apparently complete cure were under observation for from eight to twelve months from the beginning of treatment.

MENORRHAGIA.*

By T. C. NICHOLS, Morgan.

Menorrhagia is too great a loss of blood from the uterus at the time menstruation is due. The increase loss may either be due to a shortening of the intermenstrual period, or to a protracted duration of the flow, or, most of all, to an increase of the amount lost at each period. Since the normal amount is not known, and, at all events, varies much, we cannot indicate in an exact diagnosis when menorrhagia begins, but, practically, we call the flow so if it suddenly becomes much more profuse than the woman usually has it, and if it weakens her.

ETIOLOGY.

Menorrhagia is in most cases due to a disease of the uterus such as endometritis, chronic metritis, subinvolution, lacerated cervix, a granular condition of the os, a fibroid tumor, a polypus, or cancer. It may also be due to the different kinds of displacements of the uterus. Secondly, it may be due to ovarian diseases, especially oophoritis and small ovarian tumors. Thirdly, certain general acute infectious diseases are apt to cause profuse menstruation, especially cholera, smallpox, scarlet fever, typhoid fever, and inflammatory rheumatism. Among the chronic diseases hemophilia, syphilis, chlorosis, and malaria.

Some times the cause is to be sought in diseases of the heart, the liver, or the kidneys. Sometimes no cause can be assigned.

SYMPTOMS.

Besides the increased loss of blood, there are other symptoms due to it. If the loss is very heavy, it may cause acute anemia with rapid, flagging pulse, dyspnea, pallor, cold, clammy skin, faintness or syncope.

DIAGNOSIS.

The diagnosis between menorrhagia and metrorrhagia, uterine hemorrhage occurring independently of menstruation is sometimes difficult or impossible, when so frequent hemorrhages take place that the patient does not herself know what would be the regular time for a menstrual flow to come on; but in most cases the distinction can be made by the time elapsed since the last bleeding, by the sensations which generally precede the menstrual flow, by the admixture of mucus with the blood, and by the gradual way in which it appears.

*Read before the Pendleton County Medical Society.

PROGNOSIS.

It is doubtful if ever a woman has died directly of menorrhagia, but repeated losses undermine health and shorten life.

TREATMENT.

This is due to so many conditions that each case must be treated upon its own merits. Correct diagnosis is essential to a cure. The treatment of a profuse flow of blood from the uterus, as from any other part of the body, should always consist primarily in checking it. In a case of menorrhagia, the patient should be kept perfectly quiet upon her back; ice bag or cloths wrung out of cold water should be laid over the uterus, vulva and thighs, cold drinks should be given freely; all warm fluids strictly interdicted. In addition, the apartment should be kept cool, the nervous system quieted by bromides or opium, or an appropriate substitute and all conversation prohibited. The bowels should be kept open with calomel and saline aperients. In the mildest cases we prescribe ergot and other internal hemostatics. If this treatment does not have the desired effect vaginal injections with hot water. If the bleeding continues, an intra-uterine injection of hot water with or without liquid ferri is given. A bag with hot water applied to the lumbar region is sometimes effective. Kelly, in his work upon gynecology, recommends injections of normal saline into the cellular tissue under the breasts; hydrastis, viburnum prunifolium, stypticin (1 or 2 m. of a 10 per cent. solution hypodermically), calcium chloride and ipecac.

If all this is ineffectual, or if the hemorrhage is alarming, we tampon the vagina or the uterus.

In the intermenstrual period a treatment is instituted according to the cause of the menorrhagia. If the endometrium is affected, the uterus curetted or cauterized. Granulations are destroyed, the torn cervix united, a polypus removed, and a fibroid or cancer treated as taught under the discussion of that disease. Ovarian inflammation is treated with injections, applications, resolvers.

At the same time we try by means of hemostatics, tonics, and food to build up the patient as much as possible before the occurrence of the next menstruation.

In cases of heart disease a moderate bleeding gives relief, and should, therefore, not be checked too soon.

Digitalis, strophanthus, and aconite are valuable remedies. When the liver is torpid attention to diet, abstinence from alcoholic drinks, and the administration of calomel. In kidney disease especial attention should be

paid to the various function of the skin and bowels.

The physician must not forget that a moderate loss of blood is a normal condition, a kind of safety-valve for the female economy. He must, therefore, allow a reasonable amount of blood to escape before he begins to check the flow.

NEWS ITEMS AND COMMENTS

THE CONFERENCE OF COUNTY AND CITY HEALTH OFFICERS.

This important conference will convene under the auspices of the State Board of Health, at Louisville, on Wednesday, Thursday and Friday, December 8, 9 and 10. Dr. W. S. Leathers, Director of Rural Sanitation of the Mississippi State Board of Health, will be in charge of one session, and those who were at the last annual meeting will be delighted to know that the Surgeon General has consented to have Dr. McMullen, Frost and Freeman with us again. The special subject of study at this conference will be the Whole-Time Health Officer and Community Health Work. It is of the utmost importance that every health officer in the State be present. Other physicians or those interested in health matters are also cordially invited to attend. The session will be in the Armory.

I regret very much that what I said on page 576 of the November JOURNAL was not sent me for correction before publication: instead of "I regret I had no support. No man sat within the bar beside the prosecuting attorneys but myself. Those who ought to have stood by us stayed but a short time and departed." It should have been "I regret that we did not have the support of the entire medical society; besides the health officer practically no one encouraged the counsel by their presence, which means much in trials of this kind."

Please make the correction in the next issue of the JOURNAL.

Yours truly,

I. A. SHIRLEY.

Mrs. J. M. Salmon, of Ashland, has returned home from Rochester, Minnesota, where she was successfully operated. Dr. Salmon's friends will be delighted with this favorable result.

The seventy-ninth annual session of the Kentucky Midland Medical Society was held in Lawrenceburg at Masonic Hall building on Thursday and much interest was manifested

in the excellent programme given by the following: "Modern Method of Inspection of the Urethra," by Dr. J. T. Windell, of Louisville; "Observations in Obstetrics in Anderson County," by Dr. G. D. Lillard, of Lawrenceburg; "Management of Normal Labor," by Dr. G. N. Garrett, of Frankfort; "The Diagnosis and Treatment of Gastric and Duodenal Ulcers from the Medical Aspect," by Dr. J. T. McClymonds, of Lexington.

Dr. J. L. Toll, of this city, presided at the meeting as president of the Society and cordially welcomed the visiting doctors in pleasing words. A splendid dinner was served the members at the Lawrenceburg Hotel at the noon hour.

The following were the visiting doctors, besides those of our city: Neville M. Garnett, Warren Montfort, G. H. Heilman and L. T. Minish, Frankfort; J. P. Stewart, Farmdale; Ralph Guthrie and F. M. Beard, Shelbyville; T. J. McMurry, Simpsonville; J. W. Speer, Alton; Charles Nanse, George P. Sprague, L. C. Redmon and W. B. McClure, Lexington; J. T. Windell, Louisville.

Dr. J. Morgan Taylor has moved his office from the LaPoint building, on E. Washington street, to the John Lewis building, N. W. corner Main and Green streets, Glasgow.

The annual meeting and election of the Kentucky Board of Pharmacy was held Saturday at the Hermitage Hotel, Louisville. After reading the annual reports, officers were elected as follows: G. O. Patterson, of Hawesville, president; J. W. Gayle, of Frankfort, secretary; J. C. Gilbert, of Paducah, treasurer; James H. Martin, of Winchester, chairman of the Executive Committee; Edward Bloomfield, of Louisville, attorney. The board is composed of the following members, in addition to the officers elected: Prof. C. Lewis Diehl, of Louisville, and Robin H. White, of Mt. Sterling, successor to Addison Dimmitt, whose term had expired and who could not under the provisions of the law, succeed himself.

Dr. E. C. Barlow, one of Georgetown's general practitioners, has just returned from a celebrated college in New York where he has taken a course in eye, ear, nose and throat treatment, and will specialize in the future along these lines.

While at Milburn Saturday afternoon the News man learned that Dr. F. N. Simpson is improving slowly and is able to get out a little by the aid of his crutches. It will be remembered that Dr. Simpson fell several

weeks ago and broke his leg. His friends in all parts of the county will be pleased to learn of his steady improvement.

The members of the senior class of the medical department of the University of Louisville met and elected the following officers: President, Benj. H. Hildreth, Triplett, W. Va., vice president, Ervin Huckleberry, Salem, Ind.; secretary-treasurer, Clyde F. Loy, Shawnee, Okla.; class representative, Henry A. Hughes, Greenhall, Ky.; historian, Herbert E. Schoonover, Salem, Ill.

Dr. A. P. Banfield, Louisa, who was removed to the Huntington hospital is reported as being very much better.

Dr. Banfield is suffering from a badly infected limb as a result of fever several years ago, and since which has caused him much trouble. For a time the amputation of this member was feared necessary, but under the skillful medical attention of his attending physicians, the thought is about abandoned. Dr. Banfield is widely known throughout this section and his legion of interested friends will rejoice to learn of his improvement.

Dr. J. H. Shultz sold Wednesday his residence and land near Jeffersonville, to Henry Murphy, of Morgan county, for about \$4,000 cash. Possession will be given in thirty days. Dr. Schultz will move to Mt. Sterling and practice his profession.

Dr. E. D. Turner, after an absence of a few years, has returned to Cave City to again locate there. Dr. Turner was a former physician at Cave City and the fact that he will again make his residence there will be met with general approval.

Dr. Granville S. Hanes, of the medical faculty of the University of Louisville, is reported by his physicians to be in no further danger from blood poisoning, due to an infection of a finger from which he was in a serious condition several weeks at the Norton Infirmary.

Dr. S. M. Hopkins, of Gardnersville, Pendleton county, is arranging to move to Walton, having bought the property and practice of Dr. G. C. Rankins who contemplates moving to Mason county. The change will be made the latter part of this month.

Dr. Virgil Kinnaird, who has been surgeon at the Kings County hospital at Brooklyn, N. Y., for three years, has decided to locate in his native town and assist his father in practice, in Lancaster.

Dr. I. N. Fillatrean, for fourteen years a practicing physician at Knottsville, has bought out the interest of Dr. E. D. Turner at Sorgho, and is moving to-day to his new location, where he will take up his practice. Dr. Filliatrean is one of the best known physicians in the county. During the summer he has been camping with his family at Shively, Ky.

Dr. Turner has gone to Cave City, his old home, where he will take up his practice. He left with his family on October 25. Dr. Turner has been located at Sorgho for eight years.

Dr. George F. Doyle, of Philadelphia, who married Miss Anna Laura Drake, of Mt. Sterling, has completed arrangements for locating in Winchester for the practice of his profession as an eye, ear and nose specialist. His family will join him some time this week to make their future home in the Clark county capital.

Dr. Elmer N. Estes, formerly of Owenton, a graduate of the Louisville Medical College, 1906, announced last night his intention of locating in Lexington in the near future for the practice of his profession. Dr. Estes has had special hospital work in Cincinnati and before moving to Louisville several years ago, practiced in Newport and Covington for a while.

Owing to the ill health of Dr. John E. Paek, Dr. H. V. Johnson is acting as County Health officer of Scott county.

The marriage of Miss Calloway Squires to Dr. Charles Harrison McChord, of Lebanon, Ky., was celebrated Thursday evening at Meadow Brook, the home in the country on the Cleveland pike, of the bride's parents, Mr. and Mrs. Richard Martin Squires.

The bride and bridegroom begin life together with brightest prospects and the good wishes of all for perfect happiness.

The Owensboro Medical Society met in regular session Tuesday evening, October 26, 1915, at the office of Dr. C. J. Lockhart. A paper by O. W. Rash, was read. There were reports of cases by Drs. T. J. Townsend and J. M. Stuart.

Some people in Owensboro were surprised to learn that one of the most noted surgeons in the United States passed up the Ohio river Friday afternoon, in the person of Dr. W. J. Mayo, of Mayo Brothers, Rochester, Minnesota. Dr. Mayo and party are enroute to the shipyard at Jeffersonville, Ind., where Dr. Mayo's boat, which is somewhat larger than the *Inquirer*, will undergo repairs, while the party will return home by rail. The boat has traversed the Mississippi, Cumberland and Ohio rivers, and is the annual excursion made by Dr. Mayo on American inland waters. He has now traversed all the inland waters of this country, he says.

At Evansville where Dr. Mayo and party stopped for a few moments, an effort was made by several newspaper reporters to interview the famous surgeon on "What effect the European war will have on surgery."

"Newspaper men all up and down the river have been asking me what effect the European "I don't know because we have no records of any important discoveries or findings since war will have on surgery," stated Dr. Mayo. the opening of the war because we cannot get verified accounts."

Dr. Mayo is a pleasant-faced man of middle age with iron-gray hair. He was dressed in a light suit. His boat is one of the most luxuriantly appointed seen here in a long time.

In Dr. Mayo's party were Dr. and Mrs. D. C. Balfour, Mrs. D. W. Burkman, Dr. and Mrs. V. C. Vaughn, Mrs. Kahler, Mrs. D. G. Damon, Miss Gabler, all of Rochester, and Dr. and Mrs. Richard C. Hart, Philadelphia.

Dr. E. L. Branaman's residence in Fairview, Shelbyville, was sold at public sale Saturday afternoon to William Thomasson, of this city, for \$3,050. Possession will be given November 1, when Dr. Branaman and his family will move to Fisherville.

Dr. Ansel Thomas, of Louisville, was in Bardstown, Monday, October 28, 1915. He will move to Bardstown in about two weeks and occupy his handsome home on upper Third street.

The Louisville Courier-Journal, of the 10th says: "Dr. Harris Kelly, superintendent of the Eruptive Hospital, in his annual report to the Board of Public Safety says that out of 176 cases of smallpox treated there last year no deaths occurred. He credited this showing to general vaccination and proper management. There has been but one death in Louisville from smallpox in more than ten years."

The startling statement was made by the legal representative of the Kentucky board of pharmacy at the recent meeting in Louisville that the selling of morphine and narcotics had been transferred from unprincipled druggists to unprincipled physicians, since the passage of the Harrison anti-narcotic law. That there were unscrupulous druggists and unscrupulous physicians in the state was known to the reputable in each profession and that there still are is shown conclusively by the fact that the law is being violated or evaded in some instances.

The reputable trade people want protection and that will be given, in their opinion, by the legislature providing for the revocation of the license of a physician who has been convicted the second time for a violation of the anti-narcotic law, just as a druggist's license is now revoked for the same offense when repeated. The law of revocation is being rigidly enforced against the druggists who dare violate the statutory provisions and several licenses have been taken away from unprincipled men. If the same is done in regard to the so-called "doctors" who have no regard for law or life, a great reform will be perfected, whereas it is now only a halfway measure and feeble in its results.

The State Board of Pharmacy has done good work for the people and for the trade which it represents, but the desired law is much needed and there is no reason why it should not be passed, especially in view of the fact that, as Mr. Bloomfield, the legal representative of the board, pointed out in his report, ten times as much morphine is now being ordered by a certain class of irresponsible physicians as they formerly used, showing plainly that these men are taking advantage of this weakness in the law to reap a rich harvest at the expense of the mental and physical slaves of opium.

Dr. R. H. Creel, of the United States public health department, in a report just made public, says that New Orleans, to rid the place of the rat pest and ward off the bubonic plague, from which the city has suffered in the past, has expended \$4,500,000 and made rat-proof 74,426 houses, tearing away 7,000 buildings not considered worth enough to give attention to, leaving still 37,000 houses to be looked after. The pests of this country as well as the diseases to which the flesh is heir annually costs, in one way or the other, many dollars and also many lives, yet the people are prone to find fault loud and long over the efforts to prevent the expenditure of both the dollars and lives. While it is certain the work done at New Orleans will prove a preventive of bubonic plague through the rat pest—it

greatest known incentive—the people will not generally accept the work as worth the money it cost.

Final action by the Jefferson County Medical Society covering the selection of new quarters was deferred upon receipt of a notice that the Board of Public Safety was considering the advisability of permitting the organization to continue meeting in the basement of the city hospital.

The society, which formerly maintained a suite of offices in the downtown section, has been meeting in an unassigned ward in the hospital basement. Dr. J. W. Fowler, superintendent of the hospital, recently notified the Board of Safety that, owing to the trebling of nurses at the hospital, the doctors would have to vacate. A committee was thereupon appointed to investigate whether to meet in the hospital auditorium or select new quarters uptown. When official notification was received by the society yesterday that the Board of Public Safety was reconsidering, this committee was continued.

The Henry County Medical Society met in the court room at New Castle, Monday. The president, having gone on a visit to Dr. Bickers, at Port Royal, who is ill, was late in arriving and Vice President Webb Suter presided during the session. Physicians present: C. R. Johnson, A. P. Dowden, M. Bell, O. P. Goodwin, Webb Suter, W. B. Oldham, W. L. Nuttall, Owen Carroll, W. J. Morris, T. J. Hower.

Interesting reports on some of the proceedings of the State Medical Association were made by Dr. Johnson, Dr. Chapman and Dr. Carroll. They told of certain new ideas in surgery and other practice. Dr. Johnson declared it to be the best meeting he had seen in 25 years and declared that its personnel was splendid.

A letter from the Tuberculosis Commission was read asking cooperation in certain plans. Favorable action was taken.

There was some consideration of the proposition to aid in building a sanitarium or hospital in Henry County. It was strongly favored but no steps were taken.

There was informal discussion of alleged practice in the county but the matter passed.

There will be a special meeting in New Castle next Monday.

The Cesarean operation was successfully performed upon Mrs. Fred Mackey at the Continental Hospital, Pineville, October 13, and also a large tumor removed. The babe was an eight-pound girl and is alive and healthy. The mother is doing well.

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NEXT MEETING STATE ASSOCIATION.
HOPKINSVILLE, 1916

COUNTY SOCIETY REPORTS

Barren—The Barren County Medical Society met in regular session in Dr. Botts' office, Glasgow, October 15, 1915. Members present, Drs. Biggers, Smock, Siddens, Botts, Depp, Howard, and Taylor.

The society was called to order by Dr. A. T. Botts.

The minutes of the last meeting were read and approved.

There being no papers the President called for voluntary reports of clinical cases, and in response a number of interesting cases were reported by Drs. Depp, Botts, Siddens, Howard, and others. The discussion which followed was interesting and profitable, it being based on the personal experience of the participants.

The following is the program for our November meeting:

C. C. Howard, paper on "Symptomatology and Diagnosis of Gall Diseases."

A. E. Ferguson, "Discussion and Reports of Illustrative Cases."

J. W. Acton, paper or oral address on "Medical Treatment of Gall Bladder Disease."

J. M. Taylor, "Discussion and Report of Suitable Cases."

Adjourned to meet in Glasgow, November 17, 1915.

J. M. TAYLOR, Secretary.

Christian—The Christian County Medical Society met in regular session Tuesday, October 19th, in the Avalon, Hopkinsville, with the President presiding. The following members present: J. H. Price, F. M. Stites, W. R. Frey, W. E. Reynolds, B. A. Caudle, Austin Bell, A. Sargent, J. P. Keith, F. H. Bassett, E. L. Gates, J. G. Gaither, J. W. Harned, H. P. Sights, F. P. Thomas and W. S. Sandbach.

The Secretary reported bills to the amount of \$31.05, covering expenses to the State meeting which were, by a vote, ordered paid.

A. Sargent reported a case of rheumatism in a one-year-old child. Relieved promptly with sodium salicylate.

The delegation to the State meeting, Drs. Keith and Sandbach, made their reports of the meeting and Drs. Bassett, Gaither and Harned made short talks on the meeting which made every one present that was not in Louisville, sorry that they had missed such a great meeting.

B. A. Caudle read an excellent paper on "What I do in the Obstetrical Chamber." He gave his experience in obstetrics in the country. Demanding repeated specimen of urine. Desires to be called early. Uses morphine, chloroform, and pituitrin when indicated.

A. Sargent: Prefer to be engaged early. Try to impress that they are living two lives. Loose

clothing, often go hungry and avoid parties, though living a happy life. Believe in a speedy delivery of the placenta after the use of chloroform. Repair lacerations at once. Very little experience with pituitrin. Am pleased with twilight sleep. Do not give ergot.

H. P. Sights: A splendid and practical paper. Demand specimen of urine every week for the last three months. Don't over-develop the child. Can do this by extra living. Believe in the careful use of chloroform and morphine.

W. E. Reynolds: We do not examine the urine often enough. Our poisons never comes from the hands. Do not have infection without large loss of blood.

W. R. Frey: I like morphine in small doses often repeated. Do not like atropine. I not only demand a specimen of urine but demand that the patient comes to the office, hence I know just what to expect. Do not go till labor is well advanced. Believe in early delivery of placenta. Never have lost a patient from hemorrhage.

F. M. Stites: Just one word about the placenta. Do not get in a hurry about delivery. Never pass hand.

Often wait 15 minutes. Do not have to pass hand in one case in a thousand. Never felt of being of any service in getting the head over the perineum.

W. S. Sandbach: Prefer ether to chloroform. With ether and morphine can almost rival twilight sleep. Use pituitrin in both labor and abortion. Do not get in a hurry in delivering the placenta. Am not sure of much service in getting the head over the perineum.

Austin Bell: Can't see how I can know just what to expect even after a preliminary examination. Prefer to be called early. Don't think we should ever use pituitrin in primipara.

B. A. Caudle: (closing): I appreciate the discussion. Have nothing further to add.

No further business the society stood adjourned until the third Tuesday in November.

W. S. SANDBACH, Secretary.

Eagle Valley—The Eagle Valley Medical Society met at Sanders, October 13th, 1915, and was called to order by President George Purdy. The minutes of the previous meeting were read and approved.

Secretary read a letter from G. C. Hall in regard to changing date of August meeting so it would not conflict with the Muldraugh Hill Society's August meeting.

Moved by Dr. Ellis and seconded by Dr. Pirrung that the secretary be empowered to change the date of the August meeting so as not to conflict with any district meeting.

J. Edw. Pirrung read a paper "The End Results of Infection in the Bile Passages." Showing how important it was to make an early diagnosis for the welfare of the patient. Discussed

by C. B. Spalding for the surgical side, and W. F. Boggess, for the medical side.

W. F. Boggess said that so many of our prolonged typhoid cases were due to an infection of the gall bladder and by the early use of typhoid vaccine we could prevent some of these infections.

A. E. Threlkeld read a paper on "Chronic Hypertension," showing that it was only a symptom and not a disease and that we should not try and reduce the blood pressure too low, for we would do our patient more harm than good by doing so.

This paper was enjoyed by all. Discussed by Drs. Boggess and Benjamin.

J. E. Benjamin brought out the point that we should not only take the systolic pressure but the diastolic pressure, giving us the mean pressure thereby estimating the amount of work the heart muscles are doing.

W. F. Boggess read a paper on "Management of Bright's Disease," which was a very instructive paper, showing how by the proper care and management, these patients could go on living for a long time fairly comfortable with diseased kidneys.

Discussed by Drs. Pirrung, Benjamin, Robertson, Duvall and others.

J. E. Benjamin read a very interesting paper, "The Symptoms and Treatment In Decompensation of the Heart." The paper spoke for itself that Dr. Benjamin had given this subject quite a good deal of study and thought. Discussed by Drs. Duvall, Robertson, Boggess and Pirrung.

J. E. Pirrung said that he had a selfish motive in asking Dr. Benjamin to read this paper as he knew he had been doing this kind of work and was anxious to learn more about it himself. Dr. Boggess said the society owed Dr. Pirrung a vote of thanks for having Dr. Benjamin read this paper.

Election of officers for the ensuing year resulted as follows: A. E. Threlkeld was elected President, Dr. Williams, Vice President; Allen Donaldson, Secretary and Treasurer.

Motion made by Dr. Brown and seconded by Dr. Ellis that we adjourn. Carried.

ALLEN DONALDSON, Secretary.

Taylor—The Taylor County Medical Society met in the office of the secretary, October 7, 1915.

Present, Drs. Reesor, Elrod, Buchanan, Gowdy, Black, S. H. Kelsay, Hiestand and Atkinson.

The Secretary read to the society the invitation to attend the meeting of the Mississippi Valley Medical Society in Lexington.

The Secretary also read a communication from the Kentucky Board of Tuberculosis Commissioners.

E. L. Gowdy reported a series of cases of sore throat with ulceration and formation of pseudo membrane, which could be wiped away. Chil-

dren had high fever, and enlarged cervical glands. Membrane extended to nose but did not extend downward. All recovered, illness lasting about five days. Did not treat them as diphtheria.

J. L. Atkinson saw one of Dr. Gowdy's cases of sore throat and did not think it was diphtheria. It was his opinion that the streptococcus was the guilty germ in these cases.

C. V. Hiestand reported a case of a woman whose last child was twenty months old. She began to menstruate in August. He was called about the first of October. Found cervix dilated which was increased and he delivered a three-months dead fetus, with bad odor. His question in this case had fetus been dead long.

J. L. Atkinson made a condensed report of the principal points in Dr. O'Connor's paper read before the State Medical Association on the use of pituitrin in incomplete abortion.

O. R. Reesor reported using repeated doses of pituitrin in a case of labor beginning the use of the extract before there was complete dilatation of the os. Said the 1st, 2nd and 3rd doses of 1-2 c.c. each produced very little effect but the 4th dose of 1 c.c. produced prompt and decided results.

E. L. Gowdy reported a case of abortion in which he elicited the information that the patient had taken a tablespoonful of turpentine.

O. R. Reesor read a paper on "Fractures of the Upper Extremity." The subject being a large one the doctor devoted the time of his paper to description and diagnosis of the various fractures of that region.

E. L. Gowdy emphasized the fact, so prominently brought out by Dr. Murphy before the State Association, that a fracture that is properly or completely reduced will not be painful.

C. V. Hiestand discussed the difficulty in diagnosis of injuries in or near the elbow joint.

S. H. Kelsay also discussed the same phase of the subject, and also says that non-union often occurs in fractures of the humérus.

J. L. Atkinson quoted Dr. Murphy as saying, "Do not completely immobilize fractures of the shafts of long bones.

O. R. Reesor, in closing, says the discussion brought out important points in treatment—one of which is that in severe injuries practice "safety first"—call counsel.

E. L. Gowdy and **O. R. Reesor** were appointed a committee to make arrangements for the annual banquet in December.

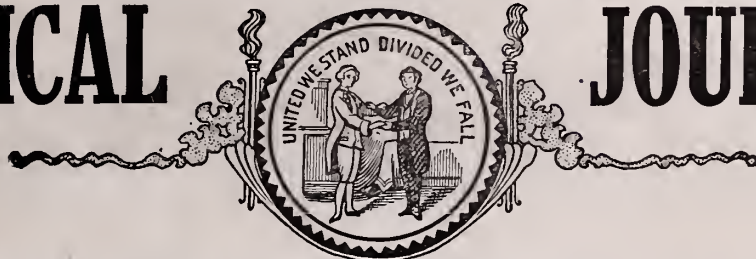
The November meeting will be held in conjunction, and as a part of the Green River Medical Society, at Campbellsville.

J. L. ATKINSON, Secretary.

Serum Ferments and Antiferments During Trypsin Shock.—The experiments conducted by the authors have demonstrated that when active trypsin solutions are injected into the blood stream an intoxication results, manifested by marked gastro-intestinal irritation, a rise of temperature, with a primary leukopenia, followed by a leukocytosis. There is usually an immediate rise in serum protease and serum esterase, together with a lengthening of the coagulation time, which in some instances may lead to a complete inhibition of coagulation. In many ways the picture is not dissimilar to anaphylactic shock. In the latter condition there is associated, however, a marked increase in the non-coagulable nitrogen of the serum, representing protein split products, and in so far differing from the effect with trypsin. The antiferment usually shows a distinct drop in titer, with a recovery following in from four to twenty-four hours. The non-coagulable nitrogen shows no constant alteration, but is never greatly changed in amount. Inactivated preparations were in some respects followed by symptoms similar to those following the injection of the active preparation. Subcutaneous and gastric absorption was practically without effect.

Smallpox Diagnosis.—Following up the suggestion of Tieche of the allergic reaction in revaccination, J. N. Force and Helen L. Beckwith, Berkley, Calif. (Journal A. M. A., Aug. 14, 1915), have studied the reactions produced in previously vaccinated animals by inoculation with vaccine virus and inoculation with smallpox vesicle contents taken from patients, to test the cutaneous allergy remaining after vaccination, and have devised laboratory methods for the diagnosis of smallpox. Their conclusions are given as follows: "1. Rabbits sensitized by vaccination with vaccine virus will give a marked intradermal reaction with smallpox vesicle contents in from twenty-four to forty-eight hours, but will not give such a reaction with varicella vesicle contents. 2. The cutaneous allergy following the original vaccination was present for at least eight months though there had been no stimulation by the allergen during that period (Rabbit 8). 3. The intradermal reaction was produced with smallpox material nine days after removal from the patient. 4. A laboratory diagnosis of smallpox is, therefore, available to physicians and health officers, since vesicle contents may be shipped in capillary tubes to central laboratories and there used for making intradermal tests on sensitized rabbits or guinea-pigs."

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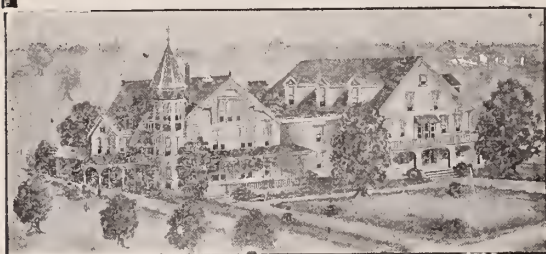
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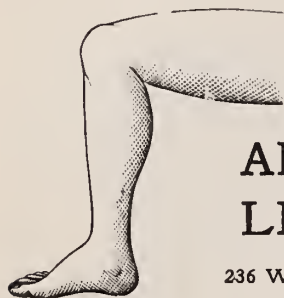
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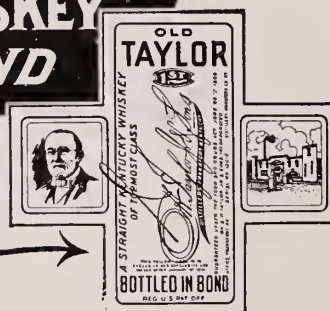
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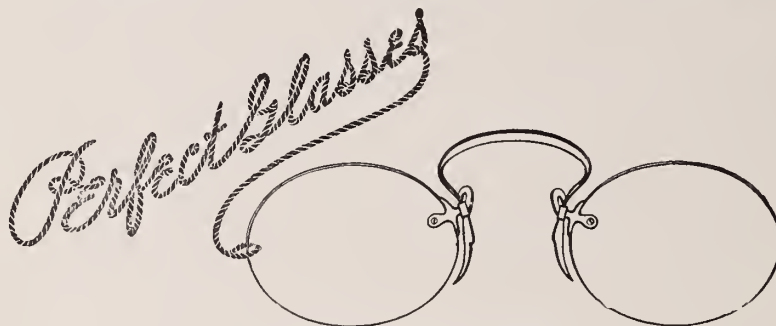
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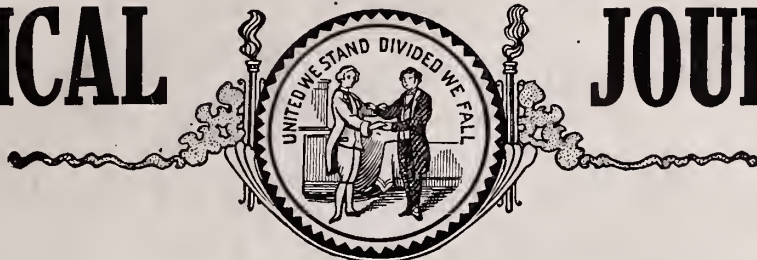
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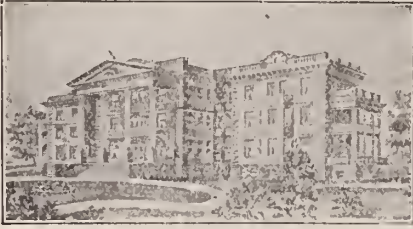
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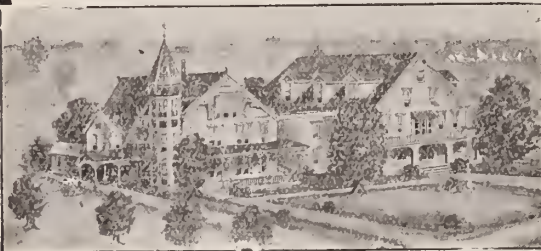
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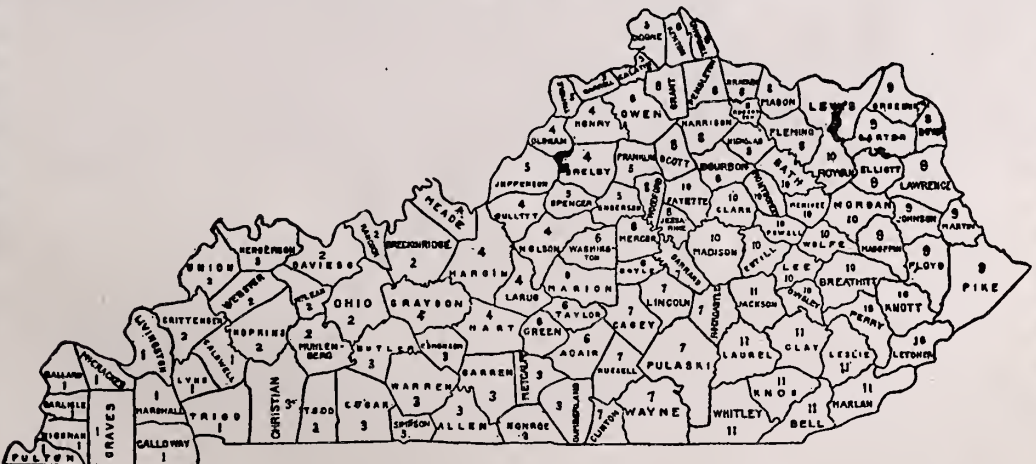
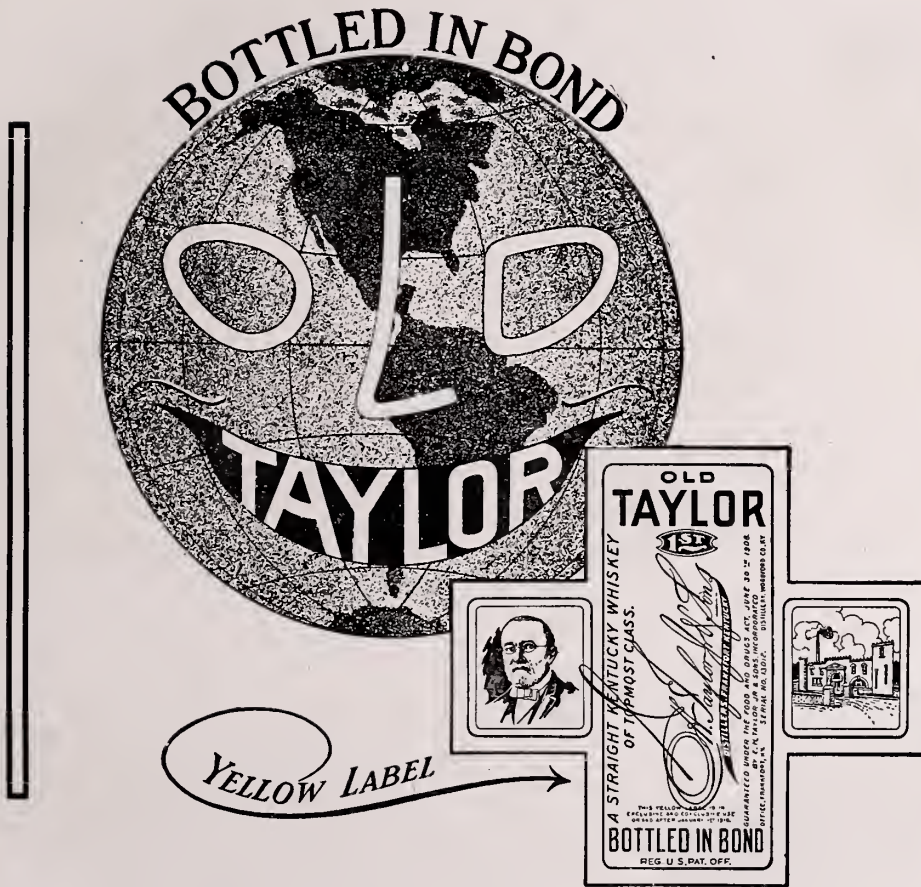
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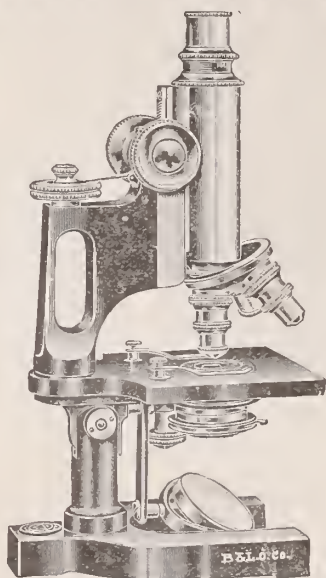
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BOWLING GREEN, KY., APRIL 1, 1915

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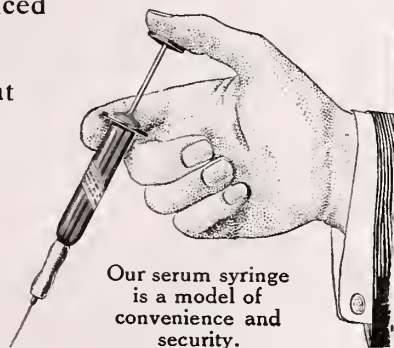
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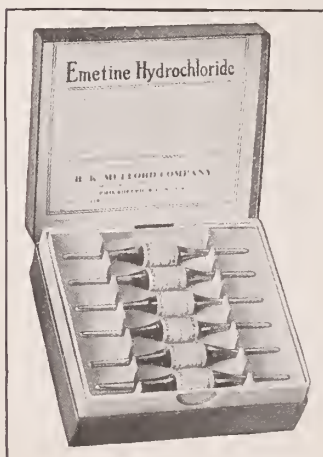
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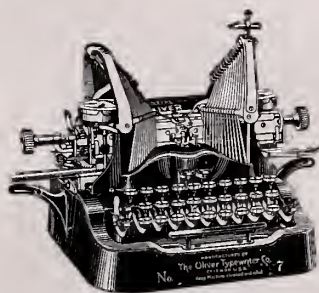
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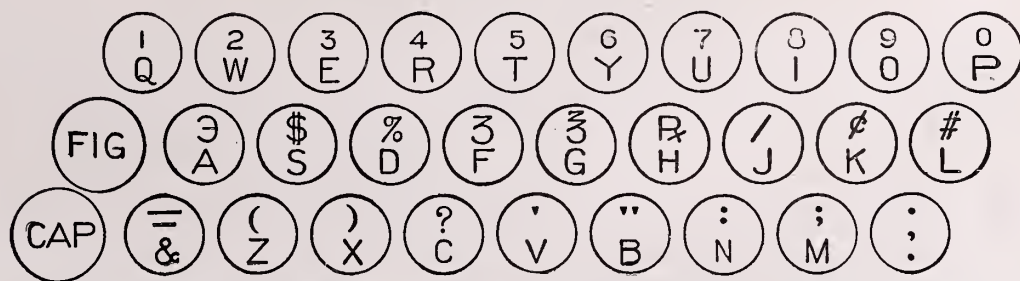
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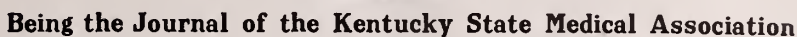
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BOWLING GREEN, KY., MAY 1, 1915

No. 6

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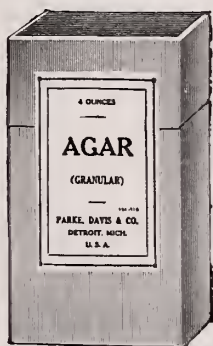
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*A Pharmacodynamic Study of the Pituitary Gland, with Tests of a New Product, by Heidelberg, Pittenger and Vanderkleed.—*Jour. A. Ph. A.*, June, 1914, page 808. The Application of Some Muscular Tissues Adapted to Physiological Standardization, by Stewart and Pittenger.—*Monthly Cyclopedia of Medicine*, July, 1914, page 305.



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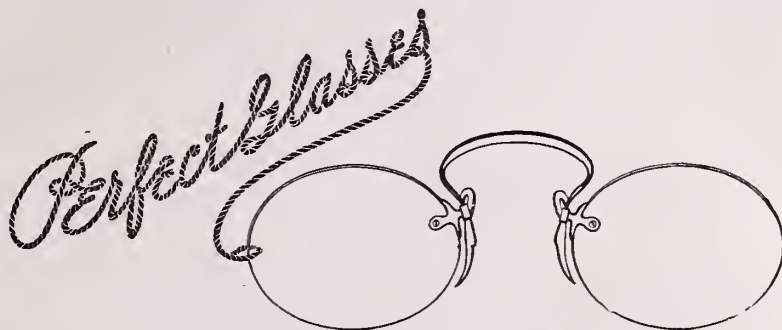
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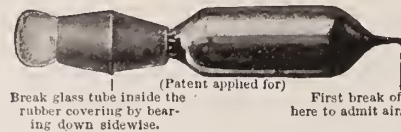
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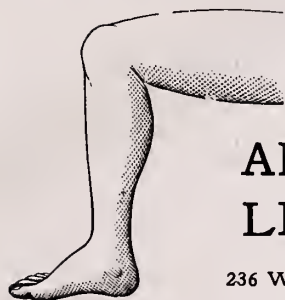
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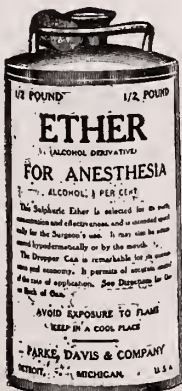
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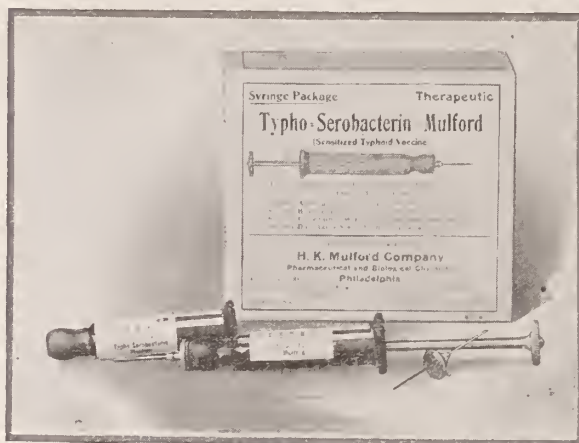
The value of typho-bacterin for immunizing against typhoid fever is established. The results secured in the United States Army prove that it is more efficacious for the prevention of typhoid fever than vaccine virus for the prevention of smallpox.

Antityphoid Immunization is Harmless.—During the past four years over 200,000 persons, mostly in the military and naval service, have been immunized without any fatalities or untoward results.*

Typho-Bacterin is composed of killed typhoid bacilli suspended in physiologic saline solution, and the number of bacteria standardized per c.c.

In preparing Typho-Serobacterin the preliminary process of immunization is carried out by combining the killed typhoid bacilli with the amboceptors, agglutinins, etc., secured from the blood serum of sheep immunized against the typhoid bacillus. The bacteria and the antibodies in the serum combine permanently.

Serobacterins, being saturated with specific antibodies, are attacked by the complement of the blood and taken up by the phagocytes much more rapidly than unsensitized bacteria. Serobacterins are characterized by rapidity of action, freedom from toxicity, and the production of efficient and durable immunity.



Typho-Serobacterin Immunizing Mulford is furnished in packages of **three** aseptic glass syringes, graduated to contain: **First Dose**, 1000 million; **Second Dose**, 2000 million; **Third Dose**, 2000 million sensitized typhoid bacilli.

The usual dose for immunizing is 1000 million killed sensitized typhoid bacilli for the first dose, followed by a second and third dose of 2000 million after 2 to 5 day intervals.

Typho-Serobacterin Therapeutic Mulford is supplied in packages of **four** aseptic glass syringes, graduated to contain: **Syringe A**, 250 million; **Syringe B**, 500 million; **Syringe C**, 1000 million; **Syringe D**, 2000 million sensitized typhoid bacilli.

Typho-Serobacterin Mixed Mulford is used for the prophylaxis and treatment of paratyphoid and mixed infection. It is supplied in packages of **three** aseptic glass syringes, graduated as follows:

	First Dose	Second Dose	Third Dose
Bacillus typhosus	1000	2000	2000 million
B. paratyphosus "A"	500	1000	1000 million
B. paratyphosus "B"	500	1000	1000 million

Typho-Serobacterin Mixed is coming into general favor for preventive immunization, as its use affords immunity against the typhoid bacilli and the paratyphoid bacilli, present in about 10 per cent of typhoid cases.

Full literature mailed upon request.

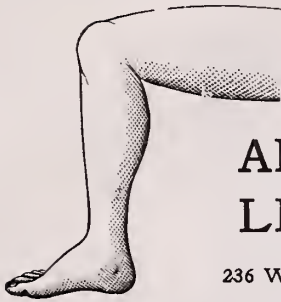
* Major Russell, Journal American Medical Association, August 30, 1913.

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Official Organ of the Kentucky Medical Association

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KENTUCKY MEDICAL JOURNAL



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Subscription Price, \$2.00

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VOL XIII.

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5,000 Unit package	- - 1.90
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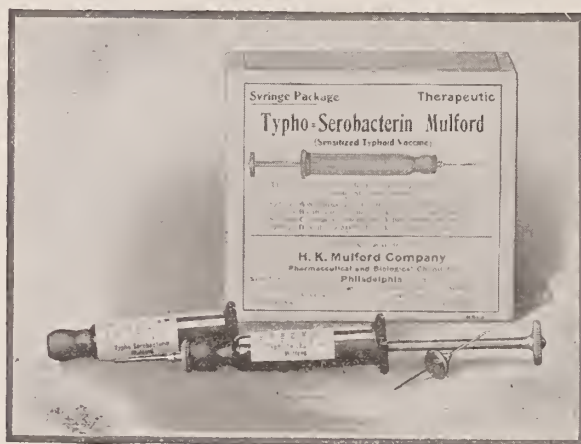
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* Major Russell, Journal American Medical Association, August 30, 1913.

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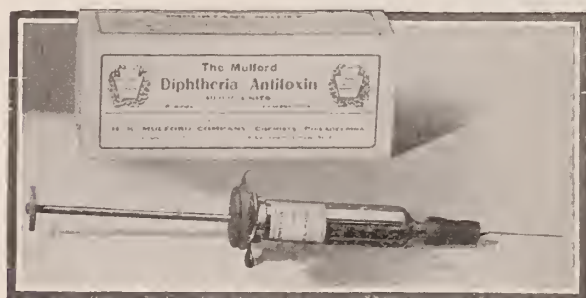
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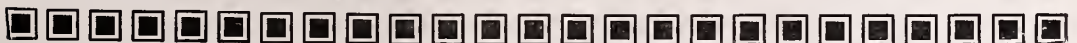
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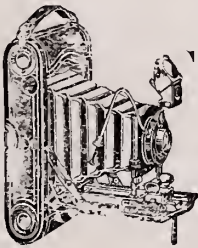
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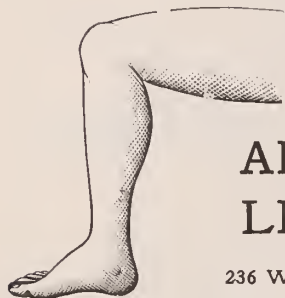
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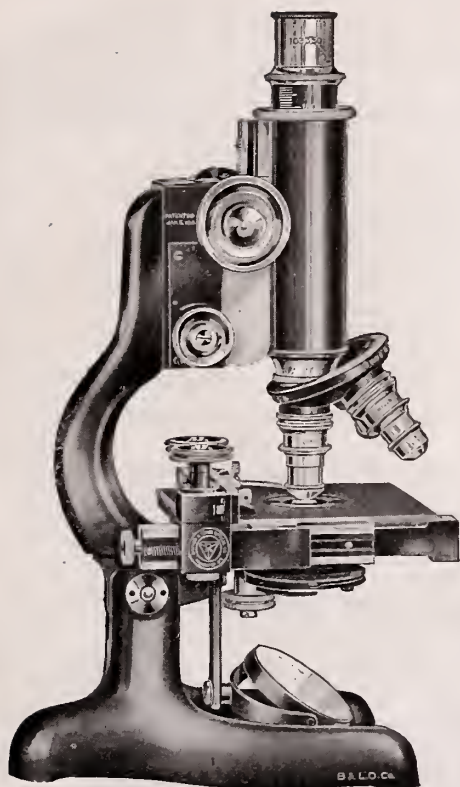
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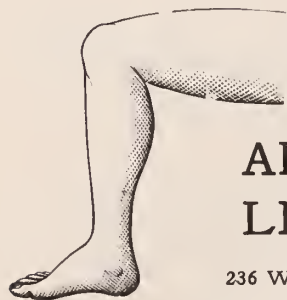
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